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Information technologies for social services in Spain: Reform of the national framework for the provision of social services in Spain

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Abstract

This report provides a description of the different Information Technology (IT) systems supporting the daily work of workers within public social services in Spain and presents recommendations for a future improved national information system for social services. Since the provision and management of social services in Spain is highly decentralised, the report mainly focuses on IT systems both at regional level, i.e., those developed and maintained by the regions (Autonomous Communities), and on IT systems existent at the central government level, i.e., those developed and maintained by the Ministry of Social Rights and Agenda 2030 (MDSA2030). The institutional set-up in which these IT systems are being (and will be) developed and exploited is extremely complex; in fact, social services fall under the responsibility of different entities at different government levels, including private actors such as NGOs and private service providers, and are scattered in several sub-areas of services, with several regions failing to have a unified system.

The assessment found a large diversity of operational systems used in the provision of primary (or basic) services. While a few regions opted for a full deployment of a common system (called SIUSS) provided by the central state, other developed their own operational system and other use a mix of several system depending on the decision of sub-regional entities. This landscape is even more complex regarding IT systems supporting the provision of specialised services because, on top of geographical differences, different areas of specialised services often use different operational systems. Consequently, from a national perspective, social services in Spain lack of a common taxonomy and IT systems cannot interoperate, or even exchange basic information about users and interventions in some cases, between regions (and sometimes within regions), between different sub-areas of social services and between social services and other areas of the public administration. From a regional perspective, the analysis found that most regions are genuinely committed to a process of improving and modernising their own IT solutions for social services. Such process is happening at different pace depending on the resources different regions have; in general, regions with a long-term strategic development programme are at a more advanced stage of IT development and have IT systems that perform better.

The MDSA2030, in the context of the development of a proposal for a new national law of social services, is strongly promoting the dialogue with regions and, though this dialogue, the convergence towards more harmonised and more interoperable IT systems for social services in the whole country. This effort includes the development of a common taxonomy and the specification of a common set of basic aggregated indicators on the provision of social services, and the specification and implementation of a new national operational system that will replace SIUSS. Fruit of a two-year collaboration and dialogue with national and regional Spanish authorities, this report makes recommendations to help them to achieve these goals.

Résumé

Ce rapport fournit une description des différents systèmes de technologie de l'information qui soutiennent le travail quotidien des travailleurs des services sociaux publics en Espagne et présente des recommandations pour un futur système d'information national amélioré pour les services sociaux. La provision et la gestion des services sociaux en Espagne étant fortement décentralisées, le rapport se concentre principalement sur les systèmes informatiques au niveau régional, c'est-à-dire ceux développés et maintenus par les gouvernements régionaux (Communautés autonomes), et sur les systèmes informatiques existant au niveau du gouvernement central, c'est-à-dire ceux développés et maintenus par le ministère des Droits sociaux et de l'Agenda 2030 (MDSA2030). Le cadre institutionnel dans lequel ces systèmes informatiques sont (et seront) développés et exploités est extrêmement complexe ; en effet, les services sociaux relèvent de la responsabilité de différentes entités à différents niveaux de gouvernement, et incluent aussi d'acteurs privés tels que les ONG et les prestataires de services privés, et sont dispersés dans plusieurs sous-domaines de services.

Le travail d'évaluation a révélé une grande diversité de systèmes opérationnels utilisés dans la provision de services primaires (ou de base). Alors que quelques régions ont opté pour le déploiement complet d'un système commun (appelé SIUSS) fourni par l'État central, d'autres ont développé leur propre système opérationnel et dans d'autres encore plusieurs systèmes co-existent en fonction de la décision des entités sous-régionales. Ce paysage est encore plus complexe en ce qui concerne les systèmes informatiques soutenant la fourniture de services spécialisés car, en plus des différences géographiques, les différents domaines des services spécialisés utilisent souvent des systèmes opérationnels différents. Par conséquent, d'un point de vue national, les services sociaux espagnols ne disposent pas d'une taxonomie commune et les systèmes informatiques ne peuvent pas interopérer, ni même, dans certains cas, échanger des informations de base sur les utilisateurs et les interventions entre les régions (et parfois au sein des régions), entre les différents sous-domaines des services sociaux et entre les services sociaux et d'autres domaines de l'administration publique. D'un point de vue régional, l'analyse a révélé que la plupart des régions sont véritablement engagées dans un processus d'amélioration et de modernisation de leurs propres solutions informatiques pour les services sociaux. Ce processus se déroule à un rythme différent selon les ressources dont disposent les différentes régions ; en général, les régions disposant d'un programme de développement stratégique à long terme sont à un stade plus avancé du développement informatique et ont des systèmes informatiques plus performants.

Le MDSA2030, dans le cadre de l'élaboration d'une proposition de nouvelle loi nationale sur les services sociaux, encourage fortement le dialogue avec les régions et, par le biais de ce dialogue, la convergence vers des systèmes informatiques plus harmonisés et plus interopérables pour les services sociaux dans l'ensemble du pays. Cet effort comprend le développement d'une taxonomie commune et la spécification d'un ensemble commun d'indicateurs agrégés de base sur la fourniture de services sociaux, ainsi que la spécification et la mise en œuvre d'un nouveau système opérationnel national qui remplacera le SIUSS. Fruit d'une collaboration et d'un dialogue de deux ans avec les autorités nationales et régionales espagnoles, ce rapport formule des recommandations pour les aider à atteindre ces objectifs.

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Abbreviations and acronyms

List of acronyms frequently used in the text

AA.CC.: Autonomous Communities (*Comunidades Autónomas*)

AEAT: Spanish tax agency (*Agencia Estatal de Administración Tributaria*)

AG: Advisory Group

API: API is the acronym for Application Programming Interface, which is a software intermediary that allows two information systems to talk to each other.

BI: Business Intelligence

DG-REFORM: Directorate-General for Structural Reform Support (European Commission)

IMSERSO: Institute for old people and social services (*Instituto de Mayores y Servicios Sociales)*

IMV: National Minimum Income benefit (*Ingreso Mínimo Vital*)

IT: Information Technologies

MDSA2030: Spanish Ministry of Social Rights and 2030 Agenda (*Ministerio de Derechos Sociales y Agenda 2030*)

SEPE: Public Employment Service (*Servicio Público de Empleo Estatal*)

SISAAD: Information System for Autonomy and Dependency care (*Sistema para la Autonomía y Atención a la Dependencia*)

SISPE: Public Employment Services information system (*Sistema de Información de los Servicios Públicos de Empleo*)

SIUSS: Social Services users information system (*Sistema de Información de Usuarios de los Servicios Sociales*)

Introduction

1. OECD countries have long recognised that digital technology can allow public authorities to deliver more public value. This is reflected, for example, in countries' investments in technology and in the OECD Council's adoption of the Recommendation of the Council on Digital Government Strategies (OECD, 2014[1]). According to a 2020 report, "A successful digital transformation will enable public sectors to operate efficiently and effectively in the digital environment, and to deliver public services that are simpler and more effective" (OECD, 2020[2]). A data-driven government "recognises and governs data as a key strategic asset (…) and reflects active efforts to remove barriers to managing, sharing and reusing data; applies data to transform the design, delivery and monitoring of public policies and services; values efforts to publish data openly and the use of data between, and within, public sector organisations; understands the data rights of citizens" (OECD, 2019[3]).

2. Social services include a wide range of public actions benefits aiming to provide personal support and care to persons in family and child-protective services, disability services, long-term care, and services for specific populations, including victims of gender violence and inclusion services. In social services, well-designed and well-functioning information systems can help improve services in multiple ways. Allowing social workers to easily collect and manage required information can leave more time for the actual service delivery. Allowing the same worker to access pertinent information from other providers or branches of social protection can help them tailor their approach to the user. Reducing the administrative burden for local and regional[1] authorities to request/submit registry data to lower/higher level authorities allows governments to gain more insights into service needs, quality and costs and plan evidence-based policies. Making anonymised data available to researchers can likewise lead to increased knowledge to orient policies. Finally, allowing citizens to identify more easily the services on offer and sign up for appointments online contributes to the creation of lower-barrier services.

3. Spain is still relatively far from having social services information systems capable of delivering these and other positive outcomes. The contrast to health information systems, for instance, is stark: in this area, different registries with detailed information at individual level are often available, they have a high coverage of the population and, where they exist, they are often used to publish relevant statistics on health system performance and quality and to explore care pathways (OECD, 2015[4]). The absence of developed information systems and social service data governance also makes it more difficult to ensure that citizens across a country's territory have a uniform access to a common minimum set of services.

4. Spain is currently exploring ways to ensure that individuals can access quality social services, regardless of where they live. While this requires legal and regulatory reforms, changes to the

[1] Throughout the report, the terms 'autonomous' and 'regional' are used interchangeably to refer to the level of the Autonomous Communities (AA.CC) in Spain. The AA.CC. are called by their names according to the Spanish National Statistical Institute.

information systems are likewise a building block in achieving this objective. This need stems from a variety of factors and is related to other necessary changes:

- Create better *monitoring capacity* to ascertain whether the people's needs are met and to improve the quality of services. Authorities need to have a more comprehensive view of the services that are delivered, who the beneficiaries are, what delays and waiting lists exist, and how expensive the provision of these services is.
- In the longer term, improve the access to relevant individual-level data to enhance the *operational capacity* of service providers to offer integrated services. To do so (efficiently), the social worker needs access to certain parts of the users' records kept by other service providers.

5. Between the second semester 2020 and June 2022, the OECD and the Spanish Ministry of Social Rights and Agenda 2030 (MDSA2030) collaborated in an ambitious project aimed at assessing the state of social services in the whole country, including a comprehensive overview of Information Technology systems that support the provision of services. Based on this analysis, the OCDE made recommendations for a future national law on social services and propose a concrete ways to improve access to key information, define national statistics on the provision of social services and define functional specifications for a new national information system on social services. Product of this collaboration, large amounts of information on different topics were collected. Given the volume and diversity of addressed topics, the findings of the project were organised in three independent but complementary publications:

- An OECD publication that analyses the social services competence framework from a legal and constitutional point of view, and points to the diversity across Spain in terms of the types of services offered, the access conditions and the human and financial resources devoted to social services across the different regions. The report proposes directions for reform to bring Spain's social services in line with evolving social needs and to set minimum standards to ensure equal access across the country (OECD, 2022[5]).
- An OECD working paper that provides an overview of how social services are organised in European Union countries. With a special focus on Spain and countries with federal or semi-federal organisation, the paper starts by analysing social services from a legal perspective. It provides a comparative perspective on several concrete aspects of social services: sources of funding (national, regional, local, etc.), organization of service provision, expenditure, human resources, governance and coordination between institutions (OECD, 2022[6]).
- **This report**, focused on the analysis of the Information Technology systems that support the daily work of public social services institutions in Spain and presents recommendations for a future national information system for social services.

6. In this context, this report documents the current features of Information Technology (IT) systems in social services in Spain, the characteristics of the statistics currently produced by autonomous governments, and the possibilities of harmonising variables and procedures across the country. The assessment is based on a stocktaking exercise of the situation of information systems in social services in Spain. The primary objective of this was to document the main features of the IT systems in all regions as well as their interoperability amongst each other, with the *Sistema de información de usuarios/as de servicios sociales* (SIUSS), which gathers data across Spain, and with the information systems of other areas such as health, employment and education.[2] Then,

[2] Large parts of the information used in this phase were collected in numerous fact-finding missions, done remotely between July 2021 and January 2022. The OECD team prepared questionnaires for primary and specialised social services, which covered topics such as the human resources devoted to information systems by the region's social

based on this assessment, the report presents proposals for an improved and updated information system for social services.

7. The report is organised as follows: this introductory section presents the rationale and the objectives of the analysis included in the following sections. Section 2 briefly analyses some aspects of the institutional set-up that are relevant in the development of information systems for social services. Section 3 informs about the operational tools used to manage social services in all AA.CC. Section 4 analyses how regional governments use the information on social services they collect and presents relevant on-going and future development projects in AA.CC. along with some examples of national information systems from other areas. Section 5 summarizes the conclusions of the assessment phase and sets the priorities, from the MDSA2030 perspective, to improve and develop the information services provided by the central administration. Finally, Section 6 presents the recommendations to develop the national information system on social services.

services offices; the operational applications used in the users' management; the existence of user's registers at the autonomous community level; the interoperability of registers; and current and medium-term IT-related projects.

1 A complex institutional setup

8. While technical aspects, such as the choice of software to manage social services operation, certainly define information systems, a number of non-technical aspects have a strong influence in shaping the possibilities to access, link and process information: the degree of agreement across different providers and regions about definitions and taxonomy in general (e.g., what constitutes a given service); data privacy frameworks that define which uses are and are not permitted; and the manpower responsible for the underlying IT infrastructure. This section briefly analyses these non-technical aspects and theirs consequences on the IT systems adopted by different administrations.

9. Creating interoperable social service IT systems in Spain appears to be a significant challenge. This is in part because of the complex nature of social services – which is common to most OECD countries - and, in part, because of the highly decentralised social services structure. The approach adopted in this report is largely dominated by technological aspects, for a detailed analysis of legal and governance aspects, please consult (OECD, 2022[5]) and (OECD, 2022[6]).

10. In both federal and centralised countries, social services tend to be organised in a localised rather than centralised manner. This is the case in Spain, where the Constitution assigns the primary competence in social assistance to the autonomous communities. Regions have different institutional set-ups and define the offered services in various ways. In addition, regional (and local) economic and financial disparities affect regions' capacity to improve their IT infrastructure. On top of the complex landscape generated by regional competencies for social services and strong regional disparities, AA.CC. and local administrations have to comply with national and European legislation.

1.1. Social services fall under the responsibility of different entities

11. Spain distinguishes between primary and specialised services. In general, primary services (depending on the AA.CC. may also be called *basic*, *general* or *community* services) serve large population groups and are ideally provided in proximity to the users – and thus by municipalities and communities of municipalities – whereas specialised services tend to be managed by larger entities up to the autonomous community level. The historical reason for this split is the target population of each type of service; it makes sense to provide primary care[3] at the most local level possible while specialised care is more efficiently provided over a larger territory. However, the distinction between what counts as a primary or as a specialised service varies across regions. Moreover, some autonomous communities such as the Illes Balears, Galicia and the Comunidad Foral de Navarra further distinguish between *primary basic* and *primary specific* services.

12. While the division between primary and specialised services can make sense from an efficiency standpoint, it also entails drawbacks for information sharing:

[3] Primary care is often associated to health primary care. In the context of this report, which focuses on social services, 'primary care' will always refer to social services primary care (*atención primaria de los servicios sociales*).

- Regional legislation assigns municipalities the competency to provide certain social services. These requirements may be defined within the law or through specific catalogues; but they do not usually impose *how* these services are provided. This leaves local entities considerable room in organising services as they consider most suitable for their needs, including in terms of which operational tools and software they use (see Section 2.1). Similarly, municipalities, which might not necessarily be responsible for managing and providing specialised services, might benefit from knowing details about the structure and information on recipients while not necessarily having access even to relevant statistics, let alone microdata.
- Within regional governments, different units manage different specialised services. Here again, aside from being rooted in historical developments, this division can make sense from the perspective of efficiency: for example, the professional toolkit required to run positive parenting programmes is quite different from the one needed to run homeless shelters and counselling services. It is therefore quite natural that providers specialise in certain services, and that different units are in charge of managing them. However, given that different providers and units may favour different operational software, information exchange between them becomes a challenge (see Section 2.2).

1.2. There is a lack of a common taxonomy

13. Significant regional differences exist in the definition of the concept, scope and competences allocation of social services established by regional statutes. Article 148.1 of the Constitution states that the AA.CC. may assume competences in social assistance. The Galician Statute is the only one that simply reproduces the wording of the Article 148.1. Other Statutes choose to combine the reference to social assistance (*asistencia social*) with others concepts such as social welfare (*bienestar social*, Principado de Asturias), social services (*servicios sociales*, Canarias, Castilla-La Mancha, Castilla y León) or community development (*desarrollo comunitario*, La Rioja, Región de Murcia, Comunidad Foral de Navarra). In addition, some Statutes aim to specify the scope of competences more precisely. For example, they define the target population groups for their autonomous social policy, such as children, families, older adults, immigrants and persons with disabilities.

14. The geographic division of the territory varies across regions (for example, *municipios, mancomunidades, islas, distritos, áreas, zonas básicas, cabildos, demarcaciones, etc.*). Although some of these terms refer to geographical levels that are actually different (like *municipalidades* and *mancomunidades*), others simply reflect different ways of naming geographical entities in the social services context. Consequently, the way some basic concepts are intended in different regions may not be the same. Some examples:

- Basic social services care (*servicio social de atención básica*) does not mean exactly the same in Comunidad Foral de Navarra and Galicia.
- The term *Prevencíón,* present in many social services catalogues, can refer to the prevention of situations of social exclusion, or to prevention against family violence or of persistent dependency situations.
- Regional minimum income benefits (*Rentas mínimas*), have different names in almost every AA.CC. In a few regions, it is classified as a primary benefit; whereas in most cases, it is considered as a specialised service.

15. These differences not only result in wide differences in the administrative setup of social services between regions, between regions and the central administration and between different areas of

social protection. They also introduce, implicitly, taxonomic differences that are reflected in the data models that each entity uses to manage social services and in the related databases.

1.3. Private actors can play an important role in the provision of services

16. Depending on the region and the service area, private providers may deliver a considerable share of services. These private providers can be non- or for-profit organisations and need to be approved and registered in social service provider registries. They can also lose their registration rights, though this appears to happen rarely.

17. Although it is difficult to identify the exact share of social services provided by private actors, they clearly play an important role in all regions. For example, in the 2019 budget of the government of Castilla-La Mancha, about 29% of the social security and protection budget was spent on service provision by external means with private entities. However, this may still exclude other expenditures such as subsidies, and does not include the share of social services expenditures contracted out by local entities.

18. In terms of information exchange, the involvement of private actors in the social services system creates additional challenges. Private providers typically have reporting requirements, often including budget reports and statistics on the social service users. In some AA.CC. such as Castilla-La Mancha and Castilla y León, a dedicated software exists to submit this information; but in most cases, the information is submitted through annual ad-hoc reports which are not connected to any regional IT software. This means that the collection, even for summary statistics, in region-wide databases is not automated; even more so, microdata on services from private providers are generally not available.

1.4. Public administrations must comply with data protection regulations

19. Social services process large amounts of personal, highly sensitive information and, accordingly, fall under the scope of the personal data protection regulation. Some of these data are subject to European and Spanish regulations on data protection. Similarly, for information security practices, social services are governed by specific regulations in the technological field at European and national levels. Specific legislation, often including clauses related to the setting up of IT systems, complements these regulations.

Protection of personal data

20. All European Union (EU) states need to comply with European-wide regulation. This regulation applies to all sectors, including the social services, which often deal with large volumes of sensitive data that deserve greater protection or caution regarding their possible uses. The translation into practice of data protection regulations must consider European regulations and their alignment with national and regional regulations. In this regard, the most important regulations are:

- Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the Protection of natural persons regarding the processing of their personal information and on the free movement of such data. This regulation refers to Directive 95/46/EC (GDPR - General Data Protection Regulation).
- *Ley Orgánica de Protección de Datos y Garantía de Derechos Digitales* (LOPDGDD) of 2018 as the successor of the Ley Orgánica 15/1999 de Protección de Datos de Carácter Personal which aligned the national regulations to the EU General Data Protection Regulation (GDPR).

21. In Spain, protection of personal data is recognised as a fundamental right. Therefore, its regulation is subject to the reservation of an Organic Law, which means only the state can legislate on the basic conditions that guarantee the equal treatment of all citizens. AA.CC. can also legislate on this matter within the limits of their competences and respecting the state norm. In particular, Article 57 of the LOPDGDD recognizes the authority of the AA.CC in the application and publication of requirements for the accreditation and organization of supervision in the application of the regulations. Thus, in addition to the Spanish Data Protection Agency (AEPD), which is a benchmark for the whole of Spain, three regions have their own authorities: the Catalan Data Protection Authority, the Basque Data Protection Agency and the Council for Transparency and Data Protection in Andalusia. These agencies are responsible for the application and monitoring of compliance with personal data protection regulations and the processing of personal data contained in publicly owned files created and maintained by autonomous, regional or local bodies.

Information security

22. Information security is responsible for protecting all the information of an organization. Its objective is to implement measures to prevent incidents such as leaks of sensitive information, computer attacks, substitution of information (e.g., identity), loss of data, etc. Regulatory provisions on information security have direct consequences in the the way public administrations store daata and exchange information about citizens. Social services are clearly concerned by them. In Spain, there is a regulation related to the Management of Information Systems, infrastructures and Data Interoperability, whose main references are:

- The Royal Decree 3/2010, of January 8, which regulates the National Security Scheme (ENS) in the field of Electronic Administration, and which implies a widespread use in the field of Public Administration before the guidelines established by Law 39/2015 and Law 40/2015 (Common Administrative Procedure of Public Administrations and Legal Regime of the Public Sector).
- The Royal Decree-Law 12/2018, of September 7, on the security of networks and information systems.
- The guidelines established by Law 39/2015 and Law 40/2015 (Common Administrative Procedure of the Public Administrations and Legal Regime of the Public Sector) and Royal Decree 203/2021, of March 30 (approving the regulation of action and operation of the public sector by electronic means) imply the need for the digitalization of the administrative management of information, and consequently, the application of these regulations in the different areas and entities involved in the processing of the same.

23. The entities and organizations involved in the provision of social services must comply with the provisions of the ENS. The same applies to private entities providing services or supplying public administrations. This set of laws and regulations implies that actors involved must make efforts to adapt their organisational models and the definition and application of their processes to ensure information security.

24. Finally, it should be noted that the processes of exchanging personal information between organisations with different competencies (e.g., education, health and employment) may require (and often does) the express consent of the data subject to allow their use.

1.5. Lack of resources can also be an obstacle to fluid data exchange

25. In all administrations, human, material and financial resources play an important role in the development of the IT infrastructure. As in almost every public administration, units devoted to plan, manage, supervise and deliver social services are not IT specialists. However, IT needs

specific to social services do exist. To deal with them, depending on their financial capacity and needs, regions and local entities have adopted different strategies:

- Regional governments often have more resources than local entities and can invest in their own IT solutions which they make available for the whole AA.CC..
- Big local entities (e.g., large cities like Madrid or Barcelona) can also opt for developing their own IT solutions. For example, Madrid has its own operational tool to manage primary care. Other local entities opt for joint projects with other close cities. For instance, in Galicia, the municipalities of Vigo, Ourense and Santiago, implemented their own operational tool for primary care. This approach tends to generate some problems at the regional level: the lack of a common IT tool often implies a replication of work by different local entities despite having similar needs as they all develop and use different solutions for registering the information of users. From an aggregate perspective, this can result in a waste of resources and make interoperability between various systems more difficult.
- Small local entities do not have the resources to outsource the development of ad-hoc solutions. In some cases, rather than turning to common IT tools like SIUSS (see Section 2.1), they decide to invest in off-the-shelf software and adapt it to their needs. In the short term, this strategy can provide a quick answer to immediate problems, but in the medium and long term it raises additional challenges. Often, these solutions are not well suited for the operational management of social services, they cannot evolve as needs change, and the lack of maintenance makes them obsolete after a few years.

26. The resources dedicated to the adoption of IT solutions often go hand-with-hand with the efficient use of them. In general, regions with a coordinated long-term strategy manage to use their existing infrastructure in a better way. That being said, AA.CC. representatives generally agree that the resources allocated to the IT for social services are insufficient (see Table 1.1). For example, Aragon, the Illes Balears and Extremadura report only one technical staff member to develop and maintain the software. Other regions do not have dedicated technicians, either because they outsource IT services completely (Navarra, Castilla y León) or simply because they lack resources (Canarias, Comunitat Valenciana). Only three regional administrations (Galicia, Castilla-La Mancha and La Rioja) reported three or more people dedicated to these tasks. This limits the quality and effectiveness of IT solutions. For example, priority projects, such as those to harmonise operational tools and increase interoperability can be delayed because of lack of resources.

Table 1.1. The use of human resources for IT varies widely across regions

Human resources dedicated to	Exist in the following regions
Implement and maintain operational software for primary care and the records and databases generated by them	Aragón, Illes Balears, Cantabria, Castilla-La Mancha, Castilla y León, Ceuta, Extremadura, Galicia, La Rioja
Statistical analysis of data on the provision of social services in primary care	Aragón, Illes Balears, Cantabria, Castilla-La Mancha, Castilla y León, Ceuta, Extremadura, Galicia, La Rioja
Outsourced IT services to generate and maintain records of all files and social interventions in primary care. Produce statistics on social services at the regional level.	Castilla-La Mancha, Galicia

Note: The human resources mentioned only refer to people working in regional governments or on behalf of regional governments, (i.e., engaged by local entities are not considered). These professionals are not exclusively involved in primary services; their duties often include specialised services and other areas. Therefore, it would be extremely difficult to estimate the actual resources available for IT task in primary services.
Source: IT questionnaires on primary services. Information about the País Vasco is lacking.

27. The development of social services, with new benefits and services and increasing demand makes all the aforementioned problems more complex. This underlines the importance to act promptly as the administrative complexity is likely to increase with time.

2 Operational software for social services adopted by regions

28. This section focuses on operational tools used in different regions. The term 'operational tools' refers to the software used by social services professionals to manage social services records at the local or autonomous community level. Such software might be used, for example, to open or close a user's file, to add social interventions in open files or to store records or export part of them. The operational tool is thus the information service that helps professionals in their day-to-day activity.[4]

2.1. Large diversity of operational tools, even within regions

29. Operational tools used to manage social services are not unique within regions across Spain. As explained in the previous section, this is mostly due to the institutional setup of social services, which grants competences in the provision and management of primary services to local entities. Specialised services are very diverse. Each area has its own history, which in most cases includes the development of specific IT systems. For this reason, primary and specialised services are discussed separately.

2.1.1. Primary services

30. The central government developed an operational tool to manage the information related to primary social services called SIUSS. SIUSS was developed from the 1990s by the Ministry for Social Affairs, the Ministry for Work and Social Affairs, the Ministry of Health and finally the MDSA2030 in collaboration with AA.CC. through specific collaboration agreements. SIUSS provides a common operational tool and defines a common classification and taxonomy of services. It also gives access to micro-data containing the totality of files and social interventions in primary care in those local entities that use it. SIUSS is made available to all AA.CC. and, through specific agreements between them and the local entities in their territory. The use of SIUSS is voluntary, leading to many different degrees of adoption across regions: in some regions, all municipalities use the system, in others, only a fraction do. Finally, some regions do not use SIUSS in any social services center.

31. Table 2.1 shows estimates of the percentage of the population living in municipalities that, respectively, use and do not use SIUSS. Disparities are large: while SIUSS is the exclusive operational tool for primary care in Cantabria, Navarra and the autonomous cities of Ceuta and Melilla, it is not used in the Illes Balears, Canarias, Castilla – La Mancha, País Vasco and Región de Murcia. Aragón, Castilla y León and La Rioja also do not use it for operational purposes but enter data into the system. In Andalucía, the Comunidad de Madrid, Principado de Asturias, Extremadura and Comunitat Valenciana, the use of SIUSS does not cover the whole territory.

[4] They are distinct from statistical analysis tools, which are analysed in Section 3.

Finally, in very few municipalities there is no operational tool and registries are managed manually.[5]

32. Using SIUSS automatically implies transmitting micro-data to the MSDA2030. In addition, a number of municipalities who do not use SIUSS also transmit information to regional authorities, which, in turn, collect the information for the whole region and transmit the micro-data to central authorities. Table 2.1 shows estimates of the percentage of municipalities that transmit the micro-data to the central government. Only the Illes Balears, the País Vasco, Cataluña and Castilla – La Mancha do not transmit any data on primary services to the MSDA2030.[6] Some examples of micro-data transmission are:

- Aragón, Castilla y León, Galicia, La Rioja and Murcia export SIUSS compatible micro-data in XML and transmit it to the MDSA2030 once a year.
- In the Comunidad de Madrid, Comunitat Valenciana, the Principado de Asturias, Andalucía and Extremadura, some municipalities who do not use SIUSS transmit micro-data; however, data are not available for all municipalities.

33. Local and regional differences in the use of SIUSS are often related to its lack of adaptability for fulfilling specific needs such as incorporating information on specific services or using data for statistical analysis, as detailed below. Several regions mention that SIUSS is slow (repeated data are not automatically pre-filled) and does not have a reliable connection, needs more modern intuitive user interfaces and it is not possible to upload relevant documents and attach them to files. Cantabria also mentioned the lack of agility and flexibility in the creation of personal files. Other regions such as Navarra and Comunitat Valenciana mentioned the need to have an interoperable tool[7]. In the municipality of Avilés it was pointed out that a common information tool is needed to allow social services professionals to manage integrated social interventions beyond primary services. SIUSS appears as a tool mostly oriented to data collection and register while certain regions mention that they are also in need of a tool to manage service files (Cantabria, Galicia)[8] and Zaragoza emphasized the importance of a database for statistical analysis, monitoring and planning. Finally, the statistical reports which can be generated with SIUSS are not always adapted to the needs of local and regional entities. Some basic indicators, like the number of people managed by each professional, are not available. By design, the system includes a list of pre-defined programmes structured in several levels of categories and sub-categories. The list is updated regularly (for example, a series of new Covid-related services were added at the beginning of the pandemic). Nevertheless, this structure is rigid and well adapted to some services that are specific to some municipalities or regions and makes it difficult to enter information on programmes that do not 'fit' to the pre-defined list. For example, the locations of the programme *Rompiendo Distancias*, in Principado de Asturias that seeks to help older people remain in their homes in remote rural areas do not correspond to the pre-defined territorial divisions.[9]

[5] During the policy interviews, Autonomous Communities have also signalled the existence of very rare cases where some services are not included in the records.

[6] Both the Illes Balears and Canarias are currently in the process of implementing solutions for data transmission.

[7] Interoperable means the ability of computer systems or software to exchange information and requires the sharing of data models and common protocols at least.

[8] Regarding the impossibility to attach documents in SIUSS, this reflects a design decision. In fact, SIUSS is a data collection and registration tool and was not conceived as a complete management tool.

[9] The information collected refers to IT infrastructure at the autonomous community level. No specific investigation of the IT infrastructure at local level was carried out. However, since primary services are provided at the local level,

Table 2.1. Disparities in the use of SIUSS are large across Autonomous Communities

Share of the population living in municipalities who use different operational tools

Autonomous community	Use SIUSS as operational tool	Use other operational tools	Notes
Andalucia	59%	41%	Some municipalities use their own operational tools; while others use an software called ACIVIT developed by a private engineering company.
Aragón	0%	100%	The municipality of Zaragoza uses its own tool and there exists another tool (APSS) for the rest of the territory.
Principado de Asturias	92%	8%	Avilés uses a tool called GUÍAS (Gestión Unificada de la Información para la Acción Socio-laboral), implemented in 2001. In addition, GUIAS uses the Pilot Viewer developed for the HSUe and SISAAD.
Illes Balears	0%	100%	There's no autonomic tool. Islands use their own solutions such as HSI and NOU
Canarias	0%	100%	A small number of municipalities do not have IT support for the management of primary care. An agreement between regional and national authorities to deploy SIUSS was reached in 2020. Agreements between the autonomic government and local entities are being negotiated. The actual deployment is expected to start progressively in 2022. A number of municipalities do not have IT support for the management of primary care.
Cantabria	100%	0%	
Castilla y León	0%	100%	There exists a common tool for the whole territory (SAUSS-CEAS). Can export in SIUSS compatible format.
Castilla - La Mancha	0%	100%	There exists a common tool for the whole territory (ASISTE/MEDAS)
Cataluña	0%	100%	There exists a main operational tool, Hestia, used by the 81% of the ABSS, the rest use different tools
Ceuta	100%	0%	
Extremadura	43%	57%	There are 2 centres which use a tool called PROCESOS. Through a collaboration agreement, they provide statistical data to the regional authorities to charge them in SIUSS.
Galicia	67%	33%	Among other, the following municipalities have their own tools: Santiago, Orense, Vigo, Pontevedra, Coruña, Arteixo, Culleredo (Ferrol and Lugo are to move away from SIUSS as well)
La Rioja	0%	100%	There exists a common tool for the whole territory (Protecnia).
Comunidad de Madrid	40%	60%	The municipality of Madrid uses its own tool.
Melilla	100%	0%	
Región de Murcia	0%	100%	They use SIUSS complemented with other operational tools like SUSI
Comunidad Foral de Navarra	100%	0%	There exist plans to move away from SIUSS in the future. The autonomic government coordinates this project, the idea is to change for the whole territory and keep compatibility with SIUSS data formats.
Comunitat Valenciana	69%	23%	The municipality of Valencia and 2 other use a tool called Socyal.

Note: Some local entities use both SIUSS and other operational tool; they are counted as SIUSS users.
Source: IT questionnaires on primary services and related interviews. Information about the País Vasco is lacking.

34. Independently of SIUSS, there are also striking differences in terms of coverage of a unified regional system. Some AA.CC. have developed an operational tool which covers the whole territory: this is the case in Castilla y León, Castilla – La Mancha, and La Rioja. As mentioned

some information about municipal realities could be collected during the interviews on primary services with the regional authorities.

above, some of these unified tools can export data in a SIUSS-compatible format. In other AA.CC.s, several systems co-exist and larger municipalities, which have more resources, tend to develop their own IT solution (Madrid, Zaragoza, several major cities in Galicia).

35. Different trends exist in the development of operational tools for primary care. More mature autonomous communities in terms of their IT systems (Castilla y León, Castilla – La Mancha and to some extent La Rioja and, soon, the Comunidad Foral de Navarra) are investing in their own unified systems and in interoperability, at least to transmit data, with SIUSS. In contrast, AA.CC. with less mature regional IT systems (Canarias, Cantabria, Extremadura, Comunitat Valenciana and Comunidad de Madrid) are trying either to deploy SIUSS or at least to unify operational systems over the whole territory. From the central government perspective, it is important that users' records (i.e. the detailed list of benefits and social interventions provided to people) are transmitted by AA.CCs. This allows central authorities (and local authorities and users) to have a comprehensive overview about the state of social services provision in the country; it also provides essential information for long-term planning.

2.1.2. Specialised services

36. The allocation of responsibilities and competences regarding specialised social services varies between regions. There is usually a General Office of Social Services (or equivalent) in charge of social services as such, often with specific territorial units to make the link with primary services and a number of Sub-General Offices or *Secretarías* (SG)[10] devoted to different areas of specialised services. Depending on the organisation of these SG in each regional government, different areas of specialised care can be grouped (i.e., depend on the same SG) or not.

37. On top of these large differences in the organisation, the catalogues of specialised services available in different regions are also quite dissimilar. Finally, specialised services providers, even if under the control of regional governments, are organised in multiple ways, ranging from pure public services under the direct responsibility of regional governments to for-profit and non-profit private organisations. Differences in the organisational chart, the catalogue and the type of providers have implications the way in which IT infrastructures are developed. Therefore, it would be virtually impossible to provide a systematic and comprehensive map of IT infrastructure for specialised social services in Spain.

Dependency, Incapacity and Minimum Rents

38. In most regions, the areas of 'Dependency', 'Incapacity' and the units in charge of managing and paying minimum income benefits are of particular importance. These areas have a developed IT infrastructure that tends to be more advanced than in other areas of specialised services.

39. Since the Law 39/2006 of 14 December, known as the *Dependency Law*, came into force in 2007, information systems in this area of specialised care have been developing in a context that favours data exchange between central and regional authorities. Along with the regulatory process, a national Information System for Autonomy and Dependency care (SISAAD) was created and made available for the AA.CC. which wanted to use it. According to the Institute of Elderly and Social Services (*Instituto de Mayores y Servicios Sociales* IMSERSO), only a couple of regions use the native SISAAD Web Service as their operational tool for dependency services. The remainder have implemented their own solution, in general as part of a much broader and long-term plan aimed at developing an integral and comprehensive regional IT system; examples of this are

[10] To simplify, we will refer to the large variety of *direcciones* or *sub-direcciones*, *secretarías generales* and other terms used by each autonomic government as SG (like *secretaría general*).

SAADPA in the Principado de Asturias, DISDEP in the Illes Balears and SAUSS-Dependencia in Castilla y León. After an initial adaptation phase, AA.CC. are moving towards complying with the specification of a common data model for a group of minimum mandatory statistics defined by the IMSERSO and improving data exchange capacities of their systems. The reasons that explain this favourable context are not only technical. In the Law, monthly minimum payments (*pagos de nivel mínimo*) from the central to regional administrations are done to reimburse regions based on the number of beneficiaries. They are subject to strict monitoring and linked to detailed statistics on the number and type of beneficiaries. To benefit from the payments, regional governments have to report monthly statistics to national authorities every month. This mechanism creates a strong incentive for regional authorities to improve their IT infrastructure in this area and to comply with technical specifications of the national system.

40. The processes of assessing, certifying and reviewing the status of people with functional ability needs falls under the responsibility of social services. This status is of greatest importance for both beneficiaries and several areas of the administration. *Disability status* is a key piece of information to determine eligibility for unemployment and disability benefits (social insurance), to calculate taxes and to open the access to in-kind benefits (social services). Therefore, IT solutions to manage, store and transmit information about the disability status of individuals to other administrations perform in general quite well in most regions. For example, in Galicia, an IT solution called CENDIS integrates all disability procedures into a single operational tool. The information is stored in a dedicated database and sent to the IMSERSO and to the Tax Agency (AEAT) (tax model 990). Moreover, database entries can be linked with the demographic registry (for example to identify deceased people) and with the jobseeker's registry (SEPE). In the Illes Balears, as mentioned above, DISDEP integrates Dependency and Disability areas in the same management tool, resulting in a high degree of integration of these two areas in a unique registry. However, interoperability with other areas is yet to be implemented. For example, access to social security registries is done manually. In Galicia and Castilla y León (application VADI), professionals can manage the assessment, certification and review procedures from a unique regional registry. Information about individuals (disability status and degree, date of latest assessment, etc.) is communicated to the IMSERSO, the AEAT (though the Regional Finance and Economy Directorate) and to Social Security. Moreover, this information is accessible to other administrations via the intermediation platform (*Supresión de Certificado en Soporte Papel*).

41. Specific databases and IT tools for the management of the Minimum Income[11] also exist in most regions. For example

- PNC in the Principado de Asturias.
- RESOGA in Illes Baleares.
- PRGC in Castilla y León.
- Galicia developed an information system to manage cash transfers consisting in a common database and three operational modules called RISGA (*Renta de Integración Social de Galicia*), AIS (*Ayudas para la Integración Social*) and PNC (to manage the non-contributory pensions).
- RMIN in the Comunidad de Madrid.

42. For historical reasons, regional authorities needed a specific tool to assess eligibility conditions (in particular families' income and assets) and to administer the cash transfers to beneficiaries. Eligibility to Minimum Income interacts with eligibility to other cash transfers (like non-contributory

[11] 'Minimum Income' is a generic name for regional Minimum Income Benefits. Minimum income benefits exist in all regions under different names and with different eligibility rules and amounts. However, they share a relatively similar design and play a similar role as an income of last resort income for income-poor families.

pensions), requiring some degree of interoperability (or at least of agile data exchange tools) with Social Security systems. Since the creation of the national minimum income benefit (*Ingreso Mínimo Vital*, IMV) in 2020, the need of strengthen interoperability with Social Security databases has become more urgent. The IMV, approved in May 2020 through the *Real Decreto-ley 20/2020*, is a non-contributory transfer, targeted towards household headed by persons aged 23-65, with means-testing thresholds for annual income and wealth depending on the size of households, as well as on the number of dependent children on them. Recipients must also have had legal residence in Spain for at least a year (exceptions apply to victims of human trafficking and gender-based violence), be registered as a job seeker and have already requested the pensions and transfers that they are eligible for. It is meant to be complementary to regional schemes, in the sense that it can provide a top-up if more generous but there might differences in the type of users covered by both schemes and some who are not eligible to IMV might still be able to receive the regional benefit. This requires detailed cross-calculations should be done to determine the Minimum Income benefit of those who receive the IMV. Since this concerns several thousand people every month, many regions are implementing a semi-manual merger of databases to speed up calculations (during the interviews, this need was mentioned by Galicia, the Principado de Asturias and Illes Balears).

Centralised tools and regional statistics

43. As mentioned, regions developed the IT infrastructure for different areas at different times, depending on their priorities and available resources. Once IT solutions are in place and people use them, administrations will tend to keep them and to adapt them to new needs rather than replace them by a new solution altogether.[12] Even in regions with mature infrastructure, specialised services are still quite decentralised from an IT perspective. Some relevant cases are:

- Castilla y León is one of the most advanced regions in terms of common standards and common IT solutions. The SAUSS system aims to integrate the access to all social services in the region. This starts with primary services but also includes specialised ones (for example, the above-mentioned module SAUSS-Dependencia). However, in 2021, a number of important areas continue to be managed through specific operational tools (e.g., PRGC for the Renta Garantizada Ciudadana, PNCS for non-contributory pensions, SPE for cash transfers for dependent people and VADI for services related with disability).
- The Principado de Asturias has many specific operational tools. The most important is TRAMITARE. The TRAMITARE-SASS platform speeds up the transfer of information for internal procedures. It creates a channel of communication between professionals through electronic processing, optimizes the management and monitoring of information in the Asturian System of Social Services (SASS) in a secure environment. Currently in a pilot phase, it does neither cover all systems nor the entire territory. Many other operational tools specific to different areas (e.g. FAMNU for services to large families, housing support, REDVIVA, etc.)
- For now, Galicia has no plans for the implementation of a unique operational tool. The idea is to use the Unique Social History (*Historia Social Única*) as a horizontal tool that will provide access to individuals' information; but this is not an operational tool as it is only meant as an information tool on the social services the person has received but cannot be used as a day-to-day tool by social workers. Many specific tools are being developed or improved. These include the abovementioned system for the management of cash transfers which includes RISGA, MENOR (minors protection area), CENPOS (for the management of different types of community centres

[12] For very good reasons: professionals know how to use them and there is no need for big IT development investments nor for changing data structures.

for old people, people with disability, social centres and centres for the protection of minors), CIM (to manage information centres for women), XOP (management of protection orders against gender-based violence), and others.

44. The development of IT solutions for specialised social services is not necessarily moving towards the conception of common interfaces for all areas. During the interviews, regional managers agreed on the fact that, in specialised care, needs in different areas are so diverse that having separate operational tools with well-suited interfaces is probably the best solution. Consequently, regions believe that the way forward is to focus on the development of common data standards (i.e., common data formats) and data models (i.e., a common taxonomy) and to improve interoperability between social services areas within the region in order to, at least, produce reliable and comparable statistics and make data consultation about social services users easier. The País Vasco is a good example of this approach. Despite a strong division of competences between the region and the provinces (*Diputaciones Forales*), it has defined a set of common indicators at the regional level without a centralised micro-data registry. These indicators are available on-line.[13] Another good example of high-quality regional statistics on primary and specialised social services is the databank developed by Castilla y León, where numerous indicators can be consulted and broken down by province and year.[14]

2.2. Interoperability is a big challenge

45. Interoperability is the ability of computer systems or software to exchange information. In the IT context, it relies in the use, by two or more systems of common data formats and communication protocols in order to enable systems to communicate with each other. The broad definition of interoperability adopted here considers all procedures allowing for automatic or quasi-automatic data exchange between two systems.

46. To be considered as interoperable, systems do not need to be fully integrated but at least share common data models and communication protocols. Unfortunately, many IT tools in the current social services landscape in Spain are “digitally walled”, that is, they are architecturally incapable of or have very limited capability to exchange information. Such systems are not cost- and service-efficient: the same data are collected multiple times, increasing the cost of maintaining the systems and causing confusion. The purpose of this section is to describe the state of interoperability between systems in different regions. For the sake of clarity, interoperability within social services, in particular between primary and specialised services, and between social services and other public administrations are discussed separately.

2.2.1. The lack of unique personal identifiers hampers interoperability and integration of databases

47. The capacity of public administrations to consistently and unambiguously determine the identity of individuals (ID) is key. Personal ID is necessary to ascertain eligibility, or to find relevant information about the services a person received in the past. For a correct and efficient identification of users, it is important to understand how the identification process occurs when an individual contacts social services for the first time, how this ID is stored and how is linked with other data sources and administrations.

[13] *Estadística de Servicios Sociales y Acción Social* (ESSEC, link).

[14] *Estadísticas de Servicios Sociales de Castilla y León* (link).

Risks associated to identification issues

48. An integration of databases[15] at the national level cannot be achieved without the homogenization of identification codes. While this is not the only pre-condition for database integration, it is a necessary one. In fact, lack of a unique personal ID and difficulties to track IDs create a number of problems:

- The impossibility of matching data with other organisations.
- The inability of sharing data between different social services centers.
- Risk of duplication of files because of the impossibility to identify the person correctly.
- At the national level, the non-existence of a unique social record hampers the portability of rights.
- Complexity when associating individuals with their family units.
- Potential security leaks (e.g. intended or unintended identity substitution).
- Risk of fraudulent behaviour

The identification process

49. The identification process can be split into two different 'actions': to *search* for someone's identity in the registry[16] and to *create* a new file using a personal ID. The procedure followed is not uniform across AA.CC. because they use different operational tools, ask for different ID numbers for primary ID and adopt different strategies to identify people when the primary ID number does not exist. When the person visits the social services for the first time in a region, in general, a new file with the new user's ID number is created. If the primary identification document cannot be produced, the new file is created using an attributed number based on user's personal information. When the person has previously made use of social services, the social service professional will search for them. If the user cannot be identified, the process can run into a dead end needing costly manual adjustments.

Personal identifiers commonly used in Spain

50. In Spain, the DNI/NIE (*Documento Nacional de Identidad*) and the Social Security Number (SSN) are the identifiers used most frequently as primary ID for a very large part of the population. Only the Comunitat Valenciana uses the Personal Identification Code (CIP) of the healthcare card. Alternative solutions like the implementation of an algorithm to generate ad-hoc social services identifiers or the use of innovative technologies relying on biometric identifiers also exist. Each of these possible ways of identifying people has advantages and disadvantages: for example, many children under 14 and some migrants do not have DNI/NIE; irregular migrants do not have SSN. Biometric identifiers, by definition, exist for everybody and, if well implemented are a fast and secure way of identifying people. But there is still need to map the biometric ID to an ad-hoc (or existing) ID number, need for specific hardware in all social services centers and biometric data are a little bit intrusive. Ad-hoc ID numbers can be defined in a rational and understandable way and are used in some regions, but, if adopted by social services only, would need to find solutions to map the ad-hoc number in social services to other areas' IDs.

[15] Here, the term 'integration of databases' should be understood as an efficient and reliable method to record, update, retrieve and track data accurately.

[16] To simplify the explanation, we can assume the existence of only one registry. The existence of several registries can lead to further complications, especially in the case of a change of the personal ID number.

Autonomous Communities adopt different strategies for undocumented persons

51. Although for most users identification is easy because they have an identification number (the DNI/NIF/NIE)[17] they use to interact with all public entities, a relatively sizeable minority of social service users does not have such identifiers. They constitute a heterogeneous group consisting of irregular immigrants, children under the age of 14, and a small number of undocumented adults. In all of these cases, the unequivocal identification of individuals in multiple registries, and even the simple identification in one registry, can be challenging. To cope with this problem, each region adopts its own strategy to identify people without DNI/NIF/NIE. These strategies, summarised in Table 2.2, seek to produce personal IDs that are not duplicated with already existing ones and that can be retrieved without ambiguity in case of a second visit of the user to social services. However, some rare difficult cases still exist and, more importantly, the identification strategy is not harmonized across regions.

Table 2.2. Administrations follow different strategies to generate ID numbers to those who do not have one

Identifier	Autonomous Community
Fictitious DNI, File number	Andalucía, Extremadura
Social security number	Illes Balears
Identification code generated by the system / Person code	Aragón, Principado de Asturias, Illes Balears, Castilla y León, Galicia, La Rioja, Región de Murcia
Combination of personal data (surname, first name + date of birth)	Castilla-La Mancha, Castilla y León, Ceuta, La Rioja, Comunidad de Madrid, Comunidad Foral de Navarra, Comunitat Valenciana and Melilla.

Source: IT questionnaires on primary services. Information about the País Vasco is lacking.

2.2.2. Interoperability between primary and specialised services

52. Different areas of specialised social services tend to use different operational tools. In 2021, no Spanish region had a unified management system for the totality of social services.[18] Therefore, interoperability is essential for the development of integrated management tools that include primary and specialised care and open the door for integrated social interventions, more and better information for users, less administrative work for professionals and the generation of more efficient and reliable statistics and reports. In contrast, the lack of interoperability leads to an extra administrative burden for professionals working in social services, for example, they may need to use multiple tools to document and request services for the same user; often, they have to manually extract and send information to colleagues from other areas (and vice-versa).

53. Social services are ever more viewed as a kind of "residual" area of public services (in the sense that they deal with a broad range of social risks, situations and intervention tools). As a result, assessment tasks that do not clearly refer to a specific area (health care, education, justice, etc.) are left to social services. Coupled with weak or non-existent interoperability between different areas of the administration, this results in a considerable amount of extra work.

[17] DNI stands for the Documento Nacional de Identidad (National Identity Card); NIF stands for the Número de Identificación Fiscal (fiscal number); and NIE stands for Número de Identidad Extranjero (Foreign Citizens identification number).

[18] Given the diversity of needs, it is perfectly understandable that different competence domains, like disability assessment services and family services, use different IT solutions for provision and administration. However, it is also important to keep consistency across these systems.

54. Currently, SIUSS does not have Application Programme Interfaces (API) allowing for software interfaces with other software.[19] This greatly limits its possibilities to exchange data with other systems. AA.CC. which are implementing IT tools for primary services, are also developing solutions for an integrated system to access and manage (all) social services. At different degrees of maturity, and with different approaches, the cases of La Rioja (PROTECNIA), Castilla – La Mancha (ASIST/MEDAS) and Castilla y León (SAUSS/CEAS) are examples of interoperability between primary and specialised services.

55. The development of regional Unique Social Histories (HSU, see above) is considered by many actors as a good opportunity to improve interoperability between different areas of social services. HSU specifications can become, in part, a first step towards a common taxonomy and shared data models between different areas, in particular between primary and specialised services. In recent years, regions often took advantage of the development of the HSU to introduce changes to pre-existing tools to centralize and harmonise personal information from various social services areas.

2.2.3. Interoperability with other public services

56. Information exchanges between social services and other areas of the public administration are very frequent and as important as information exchanges within social services. Given that the number of external institutions with which social services should eventually interoperate is very large, solutions need to be found for the exchange of information. This section summarises the main data exchange channels between social services and external entities under the form of a list of the most important and representative cases of full or semi-automatic interoperability currently in place.

57. In practice, when professionals need to retrieve or send information to other administrations, or simply to colleagues who use a different operational system, they often must open two or more interfaces in different systems, consult the information and manually send it to a colleague or enter it in their system. This solution is very time consuming and manual treatment of personal information coupled with lack of automatic ID checks, greatly increases potential sources of errors. To make the exchange of information more efficient, several possibilities exist:

- Open intermediation services to facilitate data exchange
- Partial integration allowing quick requests across distributed relational data bases
- Full integration of IT tools.

58. A first channel to implement data exchanges is through intermediation services. In Spain, the Data Check and Consulting Service (*Servicio de Verificación y Consulta de Datos: Plataforma de Intermediación, PID-SVD*) and the Replacement of Paper-Based Certificates (*Sustitución de Certificados en Soporte Papel*, SCSP), provided by the Ministry of Economic Affairs and Digital Transformation, allows any public administration to verify or consult the data of a citizen who has initiated a procedure with the entity. This reduces the need for citizens to submit documentation that the public administration already has, and to replace paper documentation with an electronic exchange of data that is faster, standardised and with full legal guarantee. These services can also be used to consult information across different public administrations. It is difficult to consolidate statistics at regional level on the use of the PID-SVD in social services. Since it is available to all levels of the administration, autonomous authorities may not necessarily be

[19] As communicated by the MDSA2030, this limitation is not only due to technical reasons but also, and mostly, to legal reasons related with data protection regulations.

informed about the use local entities make of it.[20] Among the AA.CC. which reported using PID-SVD services (Principado de Asturias, Illes Balears, Cantabria, Castilla y León, Extremadura and Comunidad Foral de Navarra), areas most frequently involved in these data exchanges are social services (the *Ingreso Mínimo Vital* seems particularly prevalent), the System for Autonomy and Dependency Care (SAAD), the Tax administration (AEAT) and to a lesser extent the Migration Authority, Courts of Law files, Public Employment Services (SISPE) and the Civil Register.

59. An alternative to intermediation platforms is the implementation of *direct interoperability* between two (or more systems). In general, this kind of integration is implemented when justified by the volume of exchanged data. For example, the entry in force of the *Ingreso Mínimo Vital*, and the rules in the calculation of regional Minimum Income Benefits derived from it, require AA.CC. social services to exchange large amounts of information (on all recipients of the IMV in the AA.CC.) every month, if not every week. In this case, full integration between the regional area of income support and Social Security would be justified. Questionnaires and interviews mention only a few examples of full interoperability. For example, in Castilla y León, some degree of interoperability exists between the social services (including primary), the tax agency (AEAT) and the national dependency information system (SISAAD). The Principado de Asturias has implemented solutions that directly retrieve information from the health system, SISAAD, SISPE and the national institute of social security (INSS). In Galicia, it is possible to retrieve information from AEAT and SISPE and to exchange information in both directions with SISAAD.

60. Several specialised services (large families, incapacity, dependency, some economic benefits) provide application-programming interfaces (API) for other systems to connect and retrieve information from them. By taking advantage of this infrastructure, external entities could retrieve data from (or send data to) these systems.

61. Another example is what one could call ‘semi-automatic’ data treatment which consists in merging large datasets from non-interoperable systems based on a unique personal ID key (typically the DNI) and run some data processing for many individuals at the same time. For example, the Illes Balears merge recipients of the IMV from national social security registries with recipients of Minimum Income Benefits from regional cash support registries to determine the amount of the regional Minimum Income Benefit. Even if not fully automated, this method has the advantage of processing all individuals in one run (and not one by one as in the previous and more frequent case). More efficient than manual data exchange, this solution can still be burdensome due to the lack of a common data model between systems. In particular, the merging process can fail because services and user’s characteristics are named in different ways across datasets.

[20] In particular, since primary services are mostly provided and administrated at local level, autonomic authorities are only partially informed about the type and volume of data exchanged between primary services centres and other institutions. Which means that in some cases information provided in the questionnaires may greatly underestimate the use of intermediation services.

3 Development of IT systems and use of information

62. Previous sections analysed the main factors driving the development of the IT infrastructure for social services. These prerequisites influence whether social services can produce registries including information about individual interventions (that is, micro-data), aggregate statistics about services and benefit delivery, but also expenditure and high-level indicators to monitor the overall activity. This section looks at the capacity of Autonomous Communities to consolidate such data at regional level as well as how they exploit the information.

3.1. Adoption of evidence-based policies

63. Evidence-based decision-making relies on the idea that, to make effective policy decisions, the best complements for domain expertise are the experience from working in the field and the ability to analyse relevant data. In the past decades, as information about virtually all aspects of personal, professional and social activities became more available, evidence-based management has gained in importance and many public and private organisations apply it. Social services are not an exception to this trend.

64. Most autonomous communities recognise the importance of statistics and declare data analysis to be a key element in their mid- and long-term planning strategy. Hence, AA.CC. support the improvement of information systems in social services; not only for operational and accountability reasons but also for strategic reasons (see Table 3.1). Not all AA.CC. are interested in exploiting individual micro-data registries, however. In many cases, this is because they do not have such registries. Only the Principado de Asturias, Castilla-La Mancha, Castilla y León, La Rioja and the Región de Murcia, and to a lesser extent Aragón, Illes Balears and Extremadura, use information available at individual level for the analysis of needs and planning purposes. For example, La Rioja used individual records on primary care services as a tool to monitor people's situation at the beginning of the COVID crisis. A larger number of AA.CC. use aggregate statistics as a support for decision-making in areas such as budgeting, human resources allocation and finance monitoring. For example, counterparts in Canarias, Ceuta, Extremadura and La Rioja indicated the use of such statistics. Finally, some autonomous communities already have or are developing business intelligence solutions to boost their analytical capacity. This is the case of the Principado de Asturias, Galicia and the Comunidad Foral de Navarra, while Castilla y León has a quite mature system in this area.

Table 3.1. Autonomous communities adopted evidence-based policies for the development of social services

Autonomous Community / City	Has the regional government developed evidence-based policy for social services?		Notes
	Based on micro-data	Based on statistics	
Andalucía	n.a.	n.a.	
Aragón	Yes	Yes	
Principado de Asturias	Yes	Yes	This is consolidated with the creation of the Observatorio Asturiano de Servicios Sociales, one of whose objectives is to contribute to evidence-based analysis (more information) In addition, autonomic regulations place the e-HSU as a keystone of the Asturian System of Social Services. A data visualisation tool and a broad project on data harmonisation are under implementation.
Illes Balears	Yes	No	
Canarias	No	Some examples	The main examples involve financial resources allocation in general and in particular regarding the minimum income benefit.
Cantabria	No	Some examples	Based on the Memorias de Servicios Sociales de Atención Primaria
Castilla y León	Yes	No	Machine learning to support decision making
Castilla-La Mancha	Yes	No	The Yearbook on primary social services analyses needs from databases to propose improvements
Cataluña	No	Yes	Each year, the Generalitat asks local entities to fill a number of harmonised statistics about the provision of social services. These statistics are available for the whole Catalonia.
Ceuta	No	Yes	To make decisions on human resources and workload. Long-term planning.
Extremadura	Yes	Yes	Mostly used to analyse the workload and situation of social services professionals
Galicia	No	Yes	The most important projects are the integration of more information in the e-HSU and the development of an analytical tool (BIPOS)
La Rioja	Yes	Yes	To build the budget; to help in programmes design and monitoring; during the COVID period, social workers in primary services received the full list of users to facilitate personalised monitoring. Also used in strategic and sectorial planning.
Comunidad de Madrid	No	Yes	Use the data on provision of basic social services (excluding the city of Madrid)
Región de Murcia	No	Yes	There is an Innovation Plan for Social Services. - 2022 - 2024 - Among other objectives is that related to the establishment of the Unified Social History.
Melilla	No	No	
Comunidad Foral de Navarra	No	Yes	A data intelligence tool is considered in the context of the development of the HSU
Comunitat Valenciana	n.a.	n.a.	

Note: Only Castilla y Leon, Galicia, the Balearic Islands and Asturias responded to the questionnaire on specialised services.
Source: IT questionnaires on primary services and related interviews. Information about the País Vasco is lacking.

65. At the national level, the MDSA2030 publishes annual reports with detailed statistics on regional minimum income benefits[21] and the activities developed in the context of the Plan Concertado[22]. The Institute for the Elderly and Social Services (IMSERSO) publishes statistics about services included in the Dependency Law, drawn from SAAD.[23] Although not included in this analysis, statistics about recipients of non-contributory pensions are also available for the whole country[24]. Finally, there is a national repository (BDNS) including financial information about all subsidies paid by the central state.

66. At the regional level, there are different approaches for the production and use of aggregate statistics on primary care. At a minimum, communities typically keep track of the number of users and interventions (often broken-down by gender), the number of professionals and financing. Ceuta, for example, also tracks the social profile, Castilla – La Mancha the age group, and the Illes Balears the country of birth and educational attainment of social services users. In many cases, the statistics are pre-defined, with some exceptions, such as La Rioja, which also indicated that business intelligence tools were used to generate necessary ad-hoc statistics.

67. AA.CC. also differ in their policy of publicly disseminating the existing statistics. Several have observatories such as Observatory of Social Services in the Principado de Asturias or the Observatory of Social Reality in the Comunidad Foral de Navarra go beyond the realm of social services and, for example, track employment figures. Aside from publishing statistics on the number of social services users and the financing, these observatories typically carry out and publish their own studies and may even provide links to other relevant research reports. Other communities that do not have observatories may still publish statistical reports on primary services. Some of the communities with the more extensive internal statistical databases, such as Castilla – La Mancha and Castilla y León, use most statistics only for internal needs and do not disseminate them.

3.2. Registries with micro-data on social services provision

68. Personal and family information about social services users, as well as details about income support and social interventions they benefited of, are managed through operational tools. In general, the tools store the information in individual/family files that compose large corpuses of data called (for the purposes of this report) social services registries. Independently of the day-to-day management, the constitution of registries is very important to:

- Keep trace of the history of benefits and interventions received by each user.
- Implement data intelligence tools or other statistical methods to build indicators.
- Perform periodic and ad-hoc statistical analysis of records and build databases with aggregated statistics.
- Inform social services in other cities/regions – or other administrations - about specific individual's situation (for example if they move from one region to another).

69. Personal information about social services users is highly sensitive and therefore requires special protection and access surveillance. In particular, data ownership will shape the action of those in

[21] www.mscbs.gob.es/ssi/familiasInfancia/ServiciosSociales/RentasMinimas.htm

[22] www.mscbs.gob.es/eu/ssi/familiasInfancia/ServiciosSociales/MemoriasPlanConcertado.htm

[23] www.imserso.es/imserso_01/documentacion/estadisticas/info_d/estadisticas/est_inf/datos_estadisticos_saad

[24] www.imserso.es/imserso_01/documentacion/estadisticas/pensiones_no_contributivas_jubilacion_invalidez

charge of authorising, implementing and controlling data exchanges between data owners and third parties (e.g., between local authorities and the central administration).

70. Throughout the interviews held with different AA.CC., it appears that there is a wide variety of situations regarding microdata ownership and access. Different practices exist as well with respect to primary and specialised social services. Local entities are the providers of primary social services, while the responsibility for specialised services can vary depending on the service area and AA.CC.. This landscape of 'distributed' data ownership has the advantage that each actor can take relevant decisions, such as about the development of a new operational tool or about a change in the specifications of some aggregated statistics database, etc., in an independent and agile way. However, this also generates serious problems for the autonomous community and particularly for the national agencies: depending on the administrative setup and on the circumstances, difficulties can arise in interpreting some variables due to a lack of harmonised taxonomy or to the total or partial availability of information about some geographical areas or services.

71. The models of ownership and access to the data vary across regions. In some, the local entity coincides with the regional government, resulting in the same entity having ownership of and access to data. In other, local entities are owners of the microdata and share them with the regional government. In other regions, local entities own the microdata (sometimes outsourcing the management), but do not share it with the regional government. Consequently, regional governments are facing many challenges to guarantee access to micro-data. By distributing the competences to local entities, AA.CC. have generated different data structures adapted to their needs and capacity for the development of software. This lack of homogeneity in the data implies that generating statistics can involve substantial manual work to obtain, clean, harmonise and integrate data. A second consequence of local entities having data ownership is that autonomous governments do not have mechanisms to enforce data homogenization or information sharing.

72. Few autonomous communities have operational social services registry databases. Aside from a lack of a political will to create such a registry, disparate operational software, the absence of a consistent and unambiguous ID and different data ownerships that do not foresee data transfer can all impede the creation of a common registry. Such registries are available in Andalusia and Ceuta, though Andalusia and Asturias are working on registries that are more comprehensive. The Community of Valencia is working on a registry that will also include employment and health records.

3.3. Projects to improve the IT infrastructure and examples from other areas

73. The central administration and AA.CC. are continuously working to improve the IT infrastructure supporting the provision of social services, through projects developed by national authorities, joint national-regional projects, autonomic projects financed by European funds and projects organised and directly funded by autonomic or local governments.

74. This section presents a summary of recent, current or shortly forthcoming projects aimed at developing or improving different aspects of the IT infrastructure for social services. The purpose of the section is not to enumerate all projects,[25] but to identify the main directions of development taken by autonomous governments and to provide good practice examples.

[25] They are numerous, especially if 'small IT developments undertaken at municipal level are considered. Following the scope of this section and the entire report, we limit our analysis to projects carried out by autonomous or national authorities.

3.3.1. Projects with a national scope

SIUSS

75. As explained in Section 2.1.1, many areas that require improvement have been mentioned by SIUSS users. Among them, SIUSS suffers from its rigidity, lack of interoperability and in some circumstances slowness due to its internal architecture. In recent years, the Sub-direction of Social Programmes (SGPS) and the Information Technology and Communication Division (DTIC) of the MDSA2030 identified the need for major reforms in SIUSS, in particular, splitting it into several independent systems. Each system should address the specific needs of different groups of users SIUSS has and, by doing so, adapt the resources needed in each of the three use cases:

- Daily operational work (TD). More than 3 000 professionals use SIUSS every day to perform the tasks required to deliver social services (for example, register new users, open and close files, register social interventions, etc.). This case represents about 90% of the social intervention processes.
- Data export (EX). Users who use SIUSS registries to perform statistical analyses.
- Administration (AD). Users who use SIUSS for administrative tasks.

76. A NextGenerationEU-funded project[26], currently in its specification phase, has been launched to change the SIUSS' architecture into a modular one where these three needs are met by independent modules (or tools) and finally replace SIUSS by a new national tool. The name of the operational tool, also containing the micro-data will be National System for the Information Management on Social Services (*Sistema Estatal de Gestión de la Información de Servicios Sociales*, SEGISS)

77. The success of this project will largely depend upon the availability of financial and technical resources. Consensus with AA.CC. and local entities to harmonise data, taxonomy, user interfaces, etc. will be essential for the success of the project. The introduction of a modular architecture with a clear identification and separation of different uses will provide a more efficient use of resources and prepare the ground for more complex developments in the future.

Unique Social History (Historia Social Única, HSU)

78. The purpose of the HSU is to unify the relevant information about the needs of social service beneficiaries and the services he or she received. At a minimum, it intends to bring the information from the primary and specialised systems (including private providers) together and make it accessible to the social service professionals working with the beneficiaries in question. Going further, it may also aim to integrate information from other systems, in particular the health systems, and allow regional governments to undertake analyses such as of (unmet) services needs or of the impact of the availability of certain services on later needs in other areas.

79. Although the HSU has a national scope, each region decides on what aspects of the HSU to develop (in practice, which information to collect and include in priority in personal records, which information in a further stage and which information not to include) and how. In this sense, referring to regional HSU is perfectly well-founded. Even more, specifications of regional HSUs largely overlap but they are (or will) not necessarily harmonised at national level.

80. The state of advancement of HSUs is quite different across the Autonomous Communities. Castilla y León and Galicia are currently the only two Communities with a fully implemented unique social

[26] For more information about NextGenerationEU funds, consult here.

history. In the former, the HSU is accessible through the Community's own social services IT solutions; while in the latter, it is based on SIUSS and the software of municipalities. The Principado de Asturias and Andalucía have pilot versions in different stages of progress. In Castilla-La Mancha, the web service exists but does not yet contain information about all relevant benefits.In most other regions, the development is less advanced. Finally, Cantabria, the Comunidad de Madrid and the Región de Murcia are still in the regulatory phase and implementation steps have not started.

Digital Social Card (Tarjeta Social Digital, TSD)

81. The TSD intends to provide access to both citizens (via a website or app) and civil servants working with social benefits to provide an overview of all transfer payments an individual receives or could have access to. It is a follow-up to the Registro de Prestaciones Sociales Públicas de la Seguridad Social (Registry of Public Social Benefits), but it includes a more comprehensive number of benefits and eases the access of citizens to relevant information. Unlike the HSU, which depends entirely on the initiative of each Autonomous Community, the TSD involves a cooperation of the local, regional and national level. The Presidential Conference (bringing together the state's President as well as the presidents of the Autonomous Communities) approved the project in 2017; and the National Institute for Social Security, INSS, launched the TSD in 2018. As the TSD requires the formal cooperation between different levels of government and many state-autonomous agreements only came into force in late 2021, data transmission from the Autonomous Communities only started at the beginning of 2022; and the communities have usually not yet abandoned their prior registries.

3.3.2. Projects with a regional scope

82. All regions are making efforts to improve the IT tools supporting social services. This reflects the intention of many regional governments to adopt an evidence-based policy making approach, and to enhance the infrastructure to do it better. From the questionnaires and interviews with autonomic experts, it was possible to identify three different lines of work: (i) improving regional systems already in place, (ii) developing projects that complement, improve, or replace SIUSS and (iii) deploying SIUSS and extending its use (only in Canarias, Ceuta and Melilla).

83. Some relevant examples of the first line of work are:

- Castilla - La Mancha: The statistical software MEDAS is used to register the interventions and files in the community.
- Castilla y León: SAUSS is an operational software for Social Services used in the entire region. Their roadmap goes through expanding this solution (link)
- La Rioja: PROTECNIA collects all the professional interventions that are carried out. It is currently being improved, including a module of statistical analysis (link).

84. Examples of the second line of development are:

- Andalucía: In this region, they have three main projects, CoheSSiona as a unique social history viewer, ProgreSSA as the application for community social services and GeSStiona as the application that collects and manages all the processes.
- Principado de Asturias: ARAMO will be a digital ecosystem that allows a comprehensive, quality approach and that guarantees the continuity of services to users and e-HSU.
- Galicia: The HSUE project works on the progressive renewal of SIUSS.

- Comunidad Foral de Navarra: A single application that becomes the Single Social, which includes the social intervention, the management of benefits, and serves for the planning of the system based on detected needs (link).

85. Most of these projects are (co-)financed by European funds. A very large majority of the IT developments is sub-contracted to private companies under the supervision of public entities' IT specialists. Ad-hoc solutions also exist to guarantee interoperability between some operational systems (especially for operational systems that have been in place since a relatively long time). The HSU, thanks to its role of 'central' repository of many information regarding services and benefits provided in different areas is also being used (indirectly) as a way to exchange basic information between different areas, including of course the social services. Although it was not the primary goal of the HSU, the progressive and rational development of it is also bringing interesting solutions to interoperability needs.

3.3.3. Examples from other areas

SISAAD

86. The IT system for autonomy and dependence (SISAAD) was created in 2007 to incorporate the information agreed upon after the approval of the Dependency Law (Law 39/2006). In the objectives of the system and its components, it was agreed to provide the Autonomous Regions with an IT solution enabling them to speed up processing of the files for the recognition of dependency status and a module for payment to the Autonomous Regions with the amounts of the benefits. In addition, the IT solution must include a statistical analysis tool. Order TAS/1459/2007, of May 25, 2007, established the Information System of the System for Personal Autonomy and Care for Dependency and created the personal data file, with the Directorate General of the Institute for the Elderly and Social Services (IMSERSO) being responsible for its administration. Most of the AA.CC. have their own operational tools and use their own systems for the management of dependency benefits.

87. Going beyond the lessons learned by the implementation of the Dependency law, SISSAD is an interesting example for the rest of social services because the system allows for the transmission of information from the autonomous communities and because of the dialogue and agreement process between AA.CC. and IMSERSO that lead to the current system.

SISPE

88. Even if belonging to the public employment services area, with more harmonisation than social services (unemployment and active labour market policies are less heterogeneous than social services and were previously part of a national system which was decentralised), this is also an interesting example for social services. SISPE is conceived as an instrument of the National Employment System that allows the central and regional Public Employment Services (SEPE) to share basic and coordinated information on Active Employment Policies and Unemployment Benefits. The SISPE began to be implemented in 2005. Prior to the implementation phase, a previous development phase included the definition of the functional model, the definition of the IT architecture and the development of the related software.

89. The System is based on a national database, which is unique and shared by all regional Public Employment Services (PES), in which the so-called common data are stored, and which must be updated by the AA.CC. and the SEPE. Common data permit the mobility of the job seekers who can get their benefits transferred throughout the national territory and the preparation of statistics and studies at a national level. These data are updated and validated according to the established rules and must necessarily reside and be kept up to date both in the corresponding Autonomous

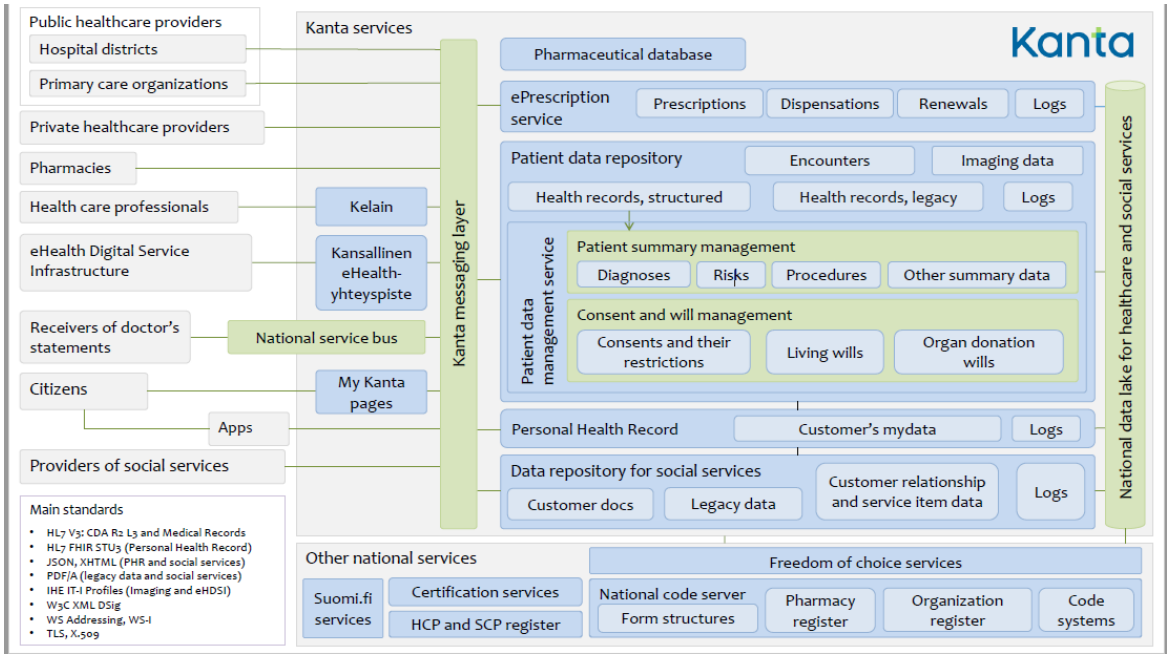
Community database (of the Community in which they are registered) and in the State Database shared by regional PES. There are common management procedures agreed upon by all the PESs, which guarantee a uniform and coordinated basic management in the whole territory. For updating and consultation, a series of information exchange processes have been defined, which are executed simultaneously and in coordination in the state system and in the respective regional system. In this way, any update of common data will be consolidated when it is validated in both systems, regardless of which of them has initiated the variation of the data (Criado Gomez, 2004[7]).

The Kanta system in Finland

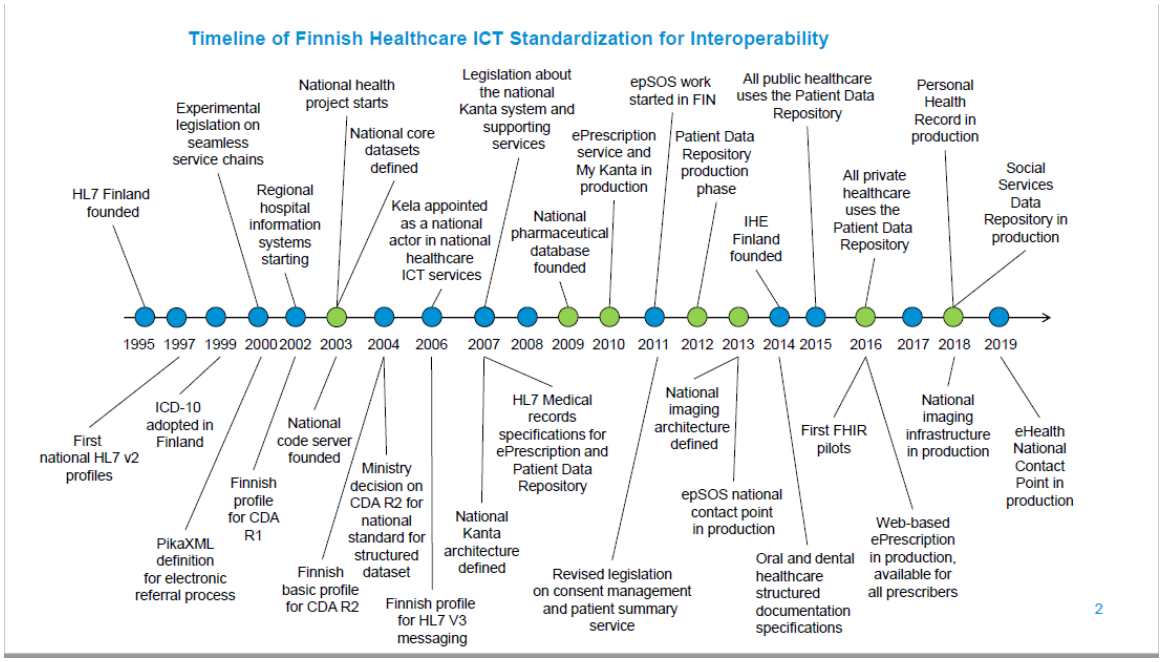
90. Implementing a large-scale information technology nationwide public system in practice is a rather long process as can be seen in the case of Finland in Figure 3.1. Recently, Finland adopted the new Act on the Electronic Processing of Client Data in Healthcare and Social Welfare, which entered into force on 1 November 2021. The new Act is the culmination of a lengthy process initiated in 1995 with the first profile definition and the core datasets for health. With the newly adopted Act, enablers of social welfare services are obliged to join the national Kanta Services. The IT Kanta system can provide an interesting case study for Spain. These national level data systems were built on top of regional and local data systems of primary health centres and hospitals that were in place already in the beginning of 2000s (Jormanainen and Reponen, 2020[8]). The national information system architecture required all healthcare operating units be designated with a unique identifier. Appropriate legislation and state budget funding were set up before the implementation activities started. Similarly, consultation activities were carried out in all services in national coordination, along with local and regional public and private entities.

Figure 3.1. The unified Health Information System (KANTA) in Finland

A. Main modules and data standards



B. Timeline and main milestones



Source: OECD communication with Finnish authorities.

4 Towards a national information system for social services

91. Providing public services that deliver on the potential of digital technology and data presents a challenge for governments. The European Commission highlights the benefits of having a unified information system, and this in many areas of social policies (youth, family, social protection, social services, etc.); for example, in the 2013 Social Investment package (European Commission, 2013[9]), which requires all entities to "speak the same language" (European Commission, 2017[10]). Recent national Recovery and Resilience plans re-iterated the importance of digitalisation in this area (European Commission, 2022[11]). Also, the OECD has stressed the importance of devising public services that integrate, from their design, the IT component (OECD, 2022[12]). To this end, it is essential that information exchange systems comply with data protection standards, for which it may become necessary to adapt legal frameworks. There is consensus among many national and autonomous authorities that it is necessary to move towards an information system (or systems) that will allow progress in the directions just pointed out. In line with these principles, and based on the conclusions of the assessment presented in previous sections, this section presents the objectives and scope of an improved national information system for social services in Spain, which frames the concrete recommendations presented in Section 5.

4.1. Overall assessment of IT systems in regions and implications

92. Because of the competence of local entities in social services, AA.CC. have generated data structures adapted to their needs and capacity for the development of IT solutions. The diversity of providers (local and autonomous agencies, primary and specialised services, public and non-public), along with the lack of unified systems in the majority of regions, lead to a situation where information about services provision is split into numerous large, small and tiny registries. In many AA.CC., no consolidated information about social interventions exists at the regional level. In some cases, it is impossible to identify unequivocally individuals appearing in different sources. In general, information exchange can be slow, burdensome or even impossible. In addition, the lack of common references and definitions for data collection and storage introduce statistical and interpretation biases and many regional governments do not have access to microdata.

93. In a context of multiple actors, with multiple goals and constraints, and starting from different situations, providing national authorities with comprehensive, timely and comparable information is complex. To address this challenge, authorities need to coordinate the specification of common operational, administrative and analytical tools with appropriate regulation incentivising local actors to adopt them. The process through which stakeholders agree on some set of specifications is as important as the specifications themselves.

94. Increasing the monitoring and operational capacities requires a shared terminology and specifications within and across AA.CC.. Although defining a shared taxonomy is not an IT challenge; it would substantially ease the development of common solutions for relevant stakeholders. To improve the operational capacity, the use of the same information systems or information systems connected via interfaces or intermediation systems, using unique identifiers will be necessary.

95. From the national authorities' perspective, common solutions must take into account the existence of the numerous tools currently used by regional and local entities and the fact that they are continuous developing. To improve the situation in the future, the specification of common IT solutions for concrete needs would require a strong coordination between a large number of actors: social services users; professionals in different sub-areas of basic and specialised services; administrative staff at local, regional and national level; analysts and policy makers and, last but not least; IT professionals who will be in charge of developing the solutions in each AA.CC..

4.2. Main elements and functionalities of the new national system

96. The assessment of IT systems, along with the MDSA2030 strategic plan and short-term priorities, enabled identifying the most important elements and functionalities of the future state information system. These elements should be understood as a functional objective, since the concrete way of putting it into practice depends on a large number of factors that cannot be analysed here. Many of the factors that influence the implementation of the national information system depend on the internal situation of each AA.CC.; for example: their information infrastructure, their autonomous strategic plans, their different applicable regulations and their existing technological and financial possibilities.

97. The main elements identified are:

- One or several statistical information repositories. In this solution, AA.CC. would provide a series of indicators with aggregated data to be defined in agreement with all regions (for instance, number of beneficiaries, human resources, waiting lists, expenditures) in primary and specialised social services in the different areas.
- A database or databases with individual records. This part of the system would collect and store individual data on users of social services. Records should be anonymised or randomised and, as for indicators, stored individual information should be agreed with all regions.
- In the medium term, statistical information repositories and micro-data registries should be fed automatically. This implies that the central system will be interoperable with the regional systems that feed it. In addition to this interoperability, which is essential for the very existence of the system, in the long term the system should be interoperable with the information systems of other administrations.

98. It would be useful to specify aggregate indicators always bearing in mind the availability and shape of the micro-data on which they will rely. This will be of great help when specifying what information is required to feed the module of individual records and will facilitate the migration from a regional calculation of indicators to a centralized calculation.

99. The new system will be called throughout the paper SIESS, as State Information System for Social Services (*Sistema Estatal de Información para los Servicios Sociales*). SIESS is a IT system that will replace SIUSS and will be used for the daily work of social services professionals and for the statistical exploitation of collected data. Final users of social serrvices (i.e., citizens) will not directly use or interactu with SIESS. The priorities for reflect the findings of the assessment process

discussed in previous sections and in the two companion papers mentioned in the introduction, fruit of a long collaboration with MDSA2030 teams and of numerous interviews with social assistant professionals in the 17 Autonomous Communities and the two Autonomous Cities of Spain. Thus, recommendations for the new system collect the inputs provided by numerous potential users and provide a concrete answer to questions such as: which are the most urgent functionalities? Which are the easiest functionalities to implement from the perspective of the MDSA2030? Which are the easiest functionalities to implement for AA.CC.?

100. First, a basic architecture for SEISS should be specified since this is a necessary condition for the implementation of any other module. As a priority, SIESS will host three repositories of indicators aggregated at regional level:[27]

a) A module on the provision of primary care on social services (for example, the number of users by type of service, human resources, waiting times, etc.),

b) a module containing the necessary information for the management and execution of the credits allocated to social services that are financed or co-financed by the State,

c) a module where the AA.CC. can provide indicators on the provision of minimum income beneficiaries (for example, tables on expenditure, number and characteristics of beneficiaries). This module would help accelerating the production of the statistical tables which are published yearly for the minimum income reports (MDSA2030, 2020[13]).

101. Second, regarding micro-data registries, the priority is the creation of a module containing the basic data of people using primary care services. In the plans set forth by the MDSA2030, a project is underway that will introduce changes to what is currently the SIUSS. The future State System for the Management of Social Services Information (SEGISS) will contain a component for managing demands and provision of social interventions and a database of records, which will be fed by the management module and by other regional management software and will allow the statistical exploitation of the data.

102. Third, interoperability of SIESS and SEGIS with regional systems or with other areas is a priority in the medium term. In the short term, the SIESS/SEGISS architecture must foresee data exchange and communication mechanisms that will facilitate the implementation of future interoperability.

[27] Statistics with a more detailed geographical granularity are possible but the first priority is regional statistics.

5 Recommendations for an updated information system

103. Previous sections presented the situation of IT systems for social services in all Autonomous Communities and Autonomous Cities as well as the current state of IT systems developed by the central government (in particular de MDSA2030). In this section, concrete IT proposals are presented to progress toward the goals set forth by the MDSA2030. Beyond the technical aspects, recommendations also include a discussion about the process of concertation between national and regional governments, which will make the creation of a state (national) information system possible. For the sake of simplicity, the recommendations are organised in three broad topics: harmonisation, governance and dialogue with regions and technical proposals.

5.1. Harmonisation and common taxonomy

104. A common taxonomy for operational purposes is a prerequisite for having common, nation-wide information about social services. This common taxonomy concerns the names given to the different services and with other important aspects, such as whether they are part of primary or specialised services, when implementing solutions at the national level. In short, it refers to all operational terminology. Such common terminology was used for the indicators proposed in the *Memorias del Plan Concertado* (latest available edition in 2020). The report presents a series of indicators structured by main services areas and broken down by region. For each area, for instance the services for autonomy and home care, an agreement was reached on how to classify all the different programmes across the regions under sub-areas such as day care for dependent people , home care, tele-assistance, etc. This was done to ensure geographical comparability and comparability over time (to be able to interpret the dynamics of the time series thus generated). At the same time, regions and the central government agree that new services have emerged and such agreement on taxonomy is now outdated.

105. The selection of a minimum set of indicators best suited to social policy monitoring and planning at national level can only be made through a stakeholder consultation that involves the State, regional and local levels. It is important to remember that the process through which consensus will be reached is as important as the selection of indicators themselves. In particular, the definition of common indicators cannot be seen as something imposed 'from above'. The OECD made an inventory of what is currently available across regions (See Annex). Based on the inventory, Table 5.1 presents a preliminary proposal for a minimum set of indicators that should be available (and harmonised) over the whole territory. For the purpose of monitoring the information, indicators should cover all services, not only those with some degree of central funding, and they should cover the entire region. Such indicators should focus first on basic or primary services and there should be a discussion of the possibility to incorporate information from specialised services as a second step. Initially, given the harmonisation already existing for long-term care, minimum income and to a certain extent protection of minors, many indicators could also be collected for these areas.

Table 5.1. Proposal for a minimum group of common indicators on provision of primary care

Area	Indicator	Break-down[1]	Notes
Demography	Population	Sex and age ranges	These statistics are probably available from official sources. They can be used to calculate other indicators (e.g., per capita expenditure) without the need to request them from the Autonomous Regions.
Financing	Total financing contribution	Government levels Type of service[2] Type of service provider[2][3]	For example: state, autonomous, local. In the Basque Country the provincial level may make sense, whereas for the rest of the AA.CC. will not be important. For the Balearic Islands the Island Councils as well as the Cabildos in the Canary Islands.
	Average financing by population size of the Municipality/Center of Social Services (CSS) [2][3]		That is, the total financing a CSS receive divided by the population it serves.
Expenditure	Total expenditure	Type of service[2] Budget item Socio-demographic categories of users [2]	Should be close to the total finacing contribution. Human resources, investment, infrastructure, etc. For example children, youth, old people, etc.
	Expenditure *per capita*		See the note on Demography.
Users and social interventions	Number of users	Type of service Socio-demographic categories of users [2]	Multiple break-downs, for example, by sex and age range. If available break-down by household characteristics would be useful.
	Number of claims and assessments[2]		In a given period of time (e.g. per month)
	Number of social interventions started and completed[2]		In a given period of time (e.g. per month)
	Hours of effective service provided per user[2][3]	Type of service	Which notably excludes hours spent in administrative work.
Human resources	Number of professionals	Function Type of contract	
	Professionals *per capita*		See the note on Demography.
	Number of professionals / CSS population[2]		Average of the ratio professionals / population over the CSS.

Notes: 1) It is not suggested to combine the breakdowns, except when they are indicated on the same line (such as sex and age). Nor is there any indication of the frequency of updating, which could vary according to the indicator (in principle, updates could be monthly). (2) Indicators that are not (not even for part of the primary care social services) in the *Memorias del Plan Concertado*. (3) Indicators that currently exist in a few CC.AA (probably difficult to implement).

106. Finally, to encourage technological convergence, one of the fundamental issues that should be discussed and agreed with AA.CC. is the data models that will be used to feed national micro-data registries. It is even advisable that, at least in the initial phase of implementation, there be a permanent discussion group to establish and clarify the data models.

5.2. Governance and dialogue with regions

107. Collaboration between different levels of government can be a useful approach to increase the relevance and usefulness of indicator systems. An OECD study (OCDE, 2008[14]) suggests that multilevel collaboration is typical of each stage of design and implementation in statistical information systems. In line with these best practices, it would be valuable to

- Establish a discussion forum for the definition and harmonisation of indicators. The participation of Spain's statistical institute (INE), due to its mission and experience in this type of projects would be valuable.
- Ensure communication channels from the local entities to the ministry in both directions. It would be important to document all feedback from the local entities to the ministry to understand better the needs and challenges. Ensuring a channel for the dissemination of the minutes after the meetings between the local authorities and the ministry to all the local entities and users of the system might also be useful.

108. In an ideal world, regions and local entities should be convinced of the advantages of joining a national information system for social services. . Nevertheless, reality is complex and additional incentives are probably needed. Among them, financial incentives may be particularly effective. A report by New Zealand's Productivity Commission (New Zealand, 2015[15]) noted that the reason why the adaptation of common IT systems is slow is that the collective benefits of it are more important than the sum of the individual benefits reaped by each provider (hence, providers do not see all the potentialities of the common system). The Spanish government may explore the possibility of making the provision of indicators by the AA.CC. conditional on the delivery of state funds that co-finance services or (specific) funds for updating regional information systems. Examples of financial incentives exist from other countries. For instance, in Medicaid, the federal government reimburses half of expenses, including those for data compilation (Mission Analytics Group, 2011[16]). In Finland, the development of an integrated social and Health IT solution benefited from national and EU funds for IT solutions (Jormanainen, 2020[17]).

109. Finally, it may be interesting to consider technical incentives in order to boost the technological convergence process, in particular:

- Make the national operational system available to all local entities. This is undoubtedly an incentive for those regions or municipalities that lack of technical or financial means to develop their own solutions. SIUSS and its future versions are a good example of this.
- Open the possibility of providing technical support to the local entities or regions who require it. One possibility is that part of the European resilience funds could be allocated to programs of this type or that there could be technical collaboration in the framework of pilot programs.
- Open up the possibility that a national system collecting statistics not only at the regional level but also at the sub-regional level may help autonomic authorities to make an effort to provide complete indicators, since this is valuable information for their own planning of regional public policies.

5.3. Proposal of an architecture for a national information system for social services

110. In this section, a meta-architecture[28] is recommended for a future improved national information system for social services (SIESS). The proposed 'architecture' is composed of various modules or functional units that will respond to the different objectives set by the MDSA2030 (see Section 4.2) and will serve as a starting point for developing concrete projects in the short and medium term. The structure of this section largely reflects the modules of the architecture.

111. The proposal is limited to the technical aspects of the new system. The constitutional and regulatory context, as well as the eventual acceptance and adoption of the new system by the AA.CC. are not discussed here. In any case, the transmission of aggregated statistics, which is the substance of SIESS in the short term, is not so much affected by data protection regulations and it is reasonable to assume that there will be no major obstacles in this respect.

112. As established in the MDSA2030 priorities (see Section 5), the architecture is focused on the construction of Indicator Repositories: provision of primary care services (*Provision*), management of credits provided by the state to social programmes (*Credits*) and beneficiaries of regional minimum income benefits (*Rentas Mínimas*). Figure 5.1 presents a generic architecture model for indicator repositories. All of them are constituted of a set of aggregated indicators and, as a minimum, the reference aggregation level of all indicators will be the region (or the city in the case of Ceuta and Melilla).

113. To be flexible and take into account the regional diversity of IT systems, the architecture has three channels for data exchange:

- Level 1: direct and full integration between the systems. This might be the case of future SEGISS and SIESS.
- Level 2: through a generic Application Programming Interface (API). In this level, external systems (for example regional operational tools, can communicate with SIESS by implementing a standard adaptor to the API).
- Level 3: possibility of uploading and downloading data manually via a web interface.

114. The most relevant elements of the Information Repository are

- The *API*, which is the component that guarantees the communication with external systems, and internally with the *Interoperator*, and with the *Database*.
- The *Interoperator*, in charge of performing the intermediate operations between the API and external systems connected with SIESS through the Level 1 (i.e. fully integrated).
- A *Database* that hosts the indicators. It is possible to create independent databases for each Repository. This depends on their volume and complexity. A first analysis suggests that volume and complexity of Provision, Credits and Rentas Mínimas are compatible with a storage in a single Indicators Database (but in different tables).
- The *Web Application* will provide access to a number of functionalities such as tool administration, access/password validation, front-end visual interface and manual data upload/download.

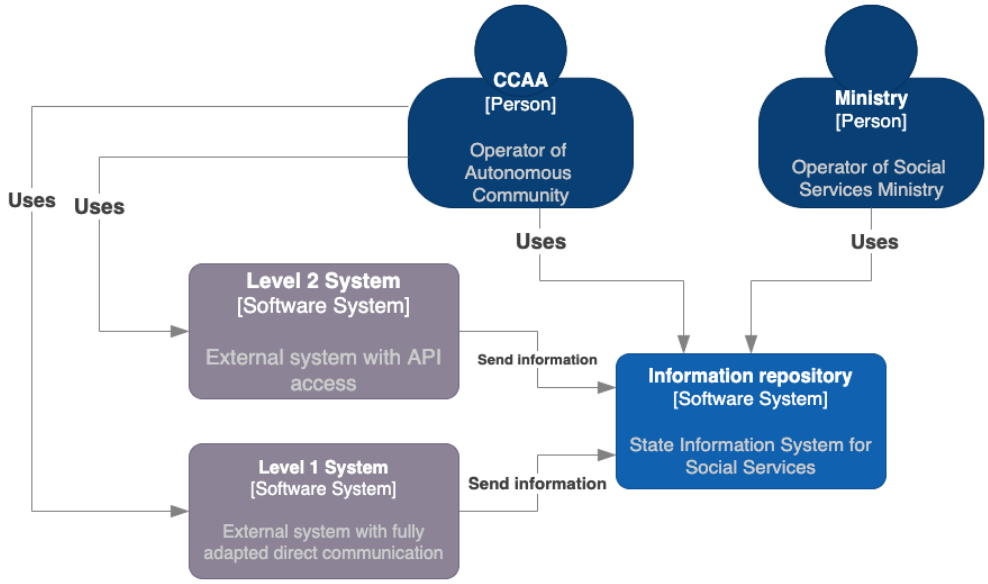
[28] To propose what is strictly understood as software architecture, it would be necessary to dispose of a level of functional information and technological definitions that goes beyond the limits of this project. However, to simplify the language, we call the recommendations developed in this section the 'architecture'.

115. A final and very important point is the need for protocols that combine data security and privacy arrangements for data sharing purposes. Following the principles of use in many projects of this type, personally identifiable data should only be shared for defined purposes and, if personal data is involved, only with the informed consent of the user. Connecting all these operations and portal access through an active directory by means of a Lightweight Directory Access Protocol (LDAP) might be an interesting solution to secure login and permissions mechanisms in a simple an integrated way.[29]

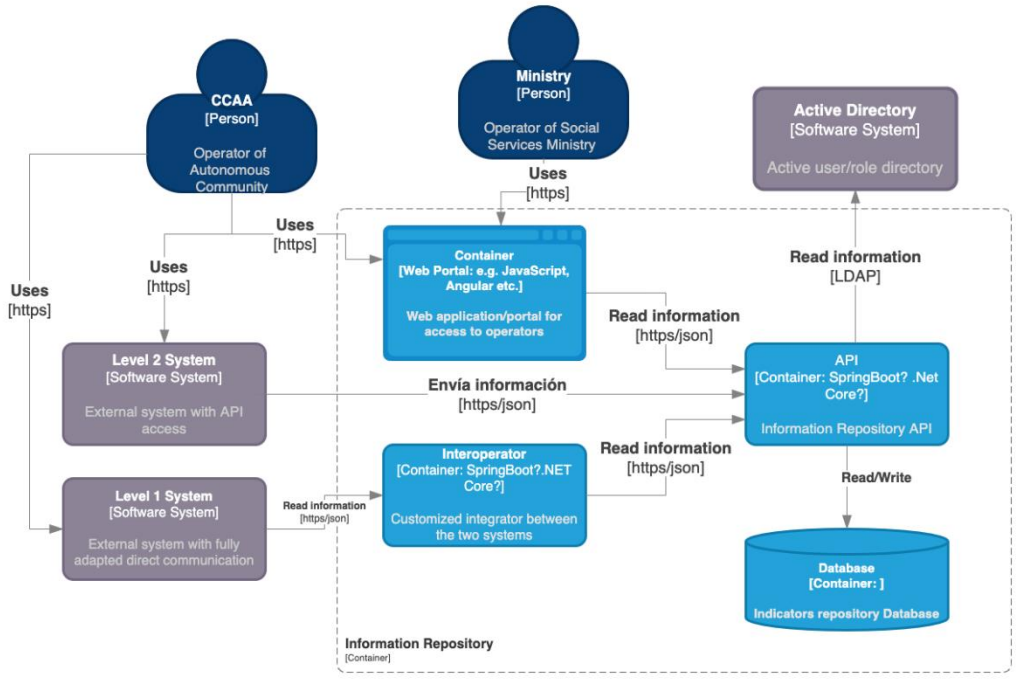
[29] LDAP (Lightweight Directory Access Protocol) is an open standard protocol for enabling anyone to locate data about organizations, individuals and other resources such as files and devices in a network -- whether on the public Internet or on a corporate Intranet.

Figure 5.1. Generic diagrams for the architecture

A. Context diagram



B. Container diagram – zoom on the Information Repositories



Note: The diagrams follow the C4 convention (https://c4model.com).

6 Conclusion

116. Well-functioning IT systems are key to addressing different needs in social services. Service users need easy access to information about available services and to the record of their own 'social services history', a transparent and simple benefit/service claim process; and when possible, transferability of rights or at least an agile procedure to transfer rights when users move. Professionals who deliver and administer services need flexible operational tools, adapted to their day-to-day work, reduced administrative burden and effective solutions to communicate and retrieve information (about individuals or families) to and from other public entities. Public authorities need access to consolidated databases and to relevant and comparable statistics across regions for planning and evidence-based policy making. Both regional and national authorities need an overall vision of the provision of services over their whole territory and ensure they are available in a timely manner.

117. In the context of a reform to improve social services in Spain and, necessarily, to improve the information systems that support them, this papers provides a comprehensive analysis of the state of information systems in social services, for the central administration and all Spanish regions. It informs competent authorities (in particular the Ministry of Social Rights and Agenda 2030) about structural, organisational, and regulatory (mainly data protection) issues underlying the current performance of IT operational tools used in social services; with clear implications in the provision of these services and ultimately, on social rights of Spanish citizens.

118. For the purpose of the paper, a large volume of information about regional IT systems was collected (in the form of interviews and questionnaires, and shared with central authorities) which was relatively unknown for central authorities. This analysis and the lessons learned during the assessment process aimed to support Spanish authorities in reviewing and setting a number of priorities for the improvement of IT systems provided at central level.

119. To move towards the implementation of a new national information system for social services, this paper also presents a series of concrete recommendations about data and taxonomy harmonisation, including a proposal for a minimum set of common indicators to monitor social services provision in the whole country. Considering the particularities of the institutional set-up regarding the provision of social services in Spain, the paper also gives recommendations about the necessary dialogue with regions and possible financial and technical incentives to facilitate the technological convergence process. The paper presents a concrete proposal for a software architecture for a national repository of relevant indicators on social services.

Annexe 6.A. Indicators on social services collected by regions

Tabla 6.1. Indicators for primary social services

	MdPC[1]	Financing	Expenditure	Users	Personnel	Centres/Other
Andalucia	x	Financing source (government level and type (Plan Concertado, Long-term care etc.)	Expenditure per service type	Users by type of service and population group	Professionals by position type (social worker, administrator etc.)	
Aragón	x		- Total expenditure on Centres/Services/Integral or Specific Programmes, by province - Ratio of total expenditure for social services per inhabitant - Cost of the maintenance of centres and of social services, by programme and province	- Users by type of service and province - Home help [equally available for other service types]: users by sex, hours of service, by province	- Personal de la estructura básica según profesión, por provincia - Personal de la estructura básica según programa, por provincia - Ratio habitantes a trabajador social/educador/psicólogo de estructura, por provincia	- Social Services Centres by province/comarca - Characteristics of the centres (centres with no Access barriers/confidential attention/waiting rooms) by province
Principado de Asturias	x	Sources of financing (government level)	- Ratio Expenditures of the Plan Concertado to population, by area - Total expenditures Plan Concertado, by area - Expenditure by type (personnel, maintenance, social benefits etc.) by area	- Users with initiated interventions, by sex and área - Initiated and opened interventions, requested needs assessment	- Total staff, centres and technicians, by área - Ratio of population to technicians, by area	Social centres and Unidades de Trabajo Social, by area
Baleares	x			- Dossiers and users and user/population ratio, by island/municipality. - Users of basic community social services: gender, age, country of birth, marital status, level of education	Professionals in basic and specialized community social services, by professional profile and island	
Canarias	x	- Financing of the Plan Concertado according to financial contributions of the Public Administration by municipalities - Financing of the Plan Concertado by type of project and municipality - Ratio of financing through the Plan Concertado per inhabitant by	- Total expenditures by line item/type of project by municipality - Expenditures on benefits by type of benefit by municipality - Total expenditure per inhabitant by municipality - Average expenditure per benefit by municipality	- Population rate per Unidad de Trabajo Social by municipality - Persons and families served in the Social Services Centre by municipality - Rate of people served in Social Services Centre per inhabitant by municipality - Benefits by type by municipality	- Staff by type/ type of project by municipality - Population rate per staff member and benefits by municipality - Staff by locatint in which they provide services'/job/function performed/employment relationship by municipality - Specific staff for the development of services	Social Services Centres and Unidades de Trabajo Social by municipality

		municipality		- Rate of benefits per 1,000 inhabitants by type by municipality - Services by population sector by municipality - Information and guidance services/home help/housing support/alternative housing/prevention and social insertion according to type of user by municipality.	by job/function performed by municipality	
Cantabria	x	Financing sources by population size	- Total amount of benefits for the promotion of autonomous living/Basic Social Income/Social Emergency/Other/economic benefits - Distribution of expenditures by type (personnel, benefits...) by population level	- Consultations attended/visits made/ files opened - Users of services by population sector - Users and hours of Home Care/Teleassistance Services - Amount and beneficiaries of Emergency Aid - Minors/Families with whom intervention has been carried out	- Professionals, by type of profession and by type of center, by SSAP - Ratio of population to social workers/educators	- Care centers - Referrals to specialized services -Acceptance and orientation services, by type of procedure
Castilla y León	x	Funding to local Corporations for home help services	- Total cost of the teleassistance program by province. - Funding for personnel and actions of the basic social action teams by province.	Telecare and home help by sex		
Castilla - La Mancha	x			Unpublished indicators: - Persons served in a specific period (by sex, age, demand...). - Types of intervention Social reports by typology, motive...., - Number of dossiers - Intervention plans developed - Number of interventions	Home service professionals and hours managed	
Cataluña	x	- Funding sources by population served [2009, 2014, 2019]. - Funding sources by population served for ancillary services [2009, 2014, 2019].	- Expenditure by type (purchases, subcontracting, personnel...) and population served/type of facility [2009, 2014, 2019]. - Expenditures for complementary services [2009, 2014, 2019].		- Staff and hours by category (salaried, self-employed, outside firm, incumbent, volunteer) and by population served [2009, 2014, 2019]. - Staff by category and gender [2009, 2014, 2019].	- Centers by population served/by type (public, private...) [2009, 2014, 2019]. - Nonprofit entities for complementary social services by population served [2009, 2014, 2019].
Ceuta	x			Users by social profile		
Extremadura	x			Users by typ of Service, sex and local entity		
Galicia	x	- Income in social service providing entities, by type of entity	- Expenditures in social service providing entities, by type of entity	- (Non-)residential places in social service providers, by facility	- Employment in entities providing social services, according to	- (New) entities by type (private for-profit, social, public), by province

		and type of income [2017, 2018].	and type of expenditure [2017, 2018]. -- Investment in entities providing social services, by type of entity and type of expenditure [2017, 2018].	ownership/age and sex of the person [2017, 2018].	type of entity, type of employee and gender [2017, 2018].	- Centers and programs by area of activity, type of center and province - Revocation of center authorizations, by type and province
La Rioja	x			- Persons served by demarcation and rate per 100 inhabitants/by age and sex/nationality group. - Number and percentage of families served, families served for the first time (new), and percentage of new families over those served; by demarcation.		
Comunidad de Madrid	x	- Distribution of the financing of Annex II, primary social care programs in the Agreements of the Community of Madrid with local entities by financing concepts [2019].	Regional budget by levels of care and specialization	-Dossiers /interventions /Persons (new) users in new social intervention [2019]. - Interventions by type of action or benefit [2019]. - Emergency assistance [2019] - Benefits for the homeless [2019]		Residential centres by type
Murcia	x		Expenditure per inhabitant		Ratio of professionals (technicians) in basic structures per inhabitant	Social resources, by group and activity, by municipality
Navarra			- Expenditures by type of program, by zone/area - Expenditure per capita and zone/area	- Number/rate of persons attended to, by age group/nationality/country of birth and sex, by area. -Cases/ Interventions - Rate of files opened per person assisted	- Personal ocupado a dedicación plena equivalente, por perfil profesional - Ratio de personal, por zona/área	
Pais Vasco		- Current expenditure in the structure of social services by source of financing. -Participation of users in financing by type of center/service and historical territory.	- Current expenditure on social services and social benefits (public and private) -Spending per inhabitant by historical territory - Foral and municipal spending - Non-residential centers in social services. - Current expenditure per user, by territory.		- Detailed distribution of staff by type of administrative and specialized professions - Staff at the core of social services (in-house, outsourced, volunteer)	Non-residential centers in social services. Occupancy rate (users/places)
Comunidad Valenciana	x	-		-	-	-

Notes: (1) MdPC means Memorias del Plan Concertado. This column indicates with an 'x' the Autonomous Regions that provide information to be published in the MdPC. The indicators mentioned in the other columns may or may not be included among the indicators of the Concerted Plan Reports. The geographical level of reference used to establish whether an indicator is available is the region (the Autonomous City in the case of Ceuta and Melilla). For example, in the Basque Country, "Current expenditure/user person and by territory" is available; this means that this indicator is available in the entire Basque Autonomous Community. In some regions, there are indicators available only in some municipalities or in part of the autonomous territory; these are not included in the table.
Source: Cuestionario OCDE y búsqueda internet.

References

Criado Gomez, I. (2004), *SISPE: INTERCONEXIÓN DE LOS SISTEMAS DE LOS SERVICIOS PÚBLICOS DE EMPLEO ESTATAL Y AUTONÓMICOS*. [7]

European Commission (2022), *Digital path to recovery and resilience in the European Union*, Publications Office of the European Union, Luxembourg. [11]

European Commission (2017), *Peer Review on "Social Protection Information System"*. [10]

European Commission (2013), *Social Investment package - key facts and figures*. [9]

Jormanainen (2020), *CAF and CAMM analyses on the first 10 years of national Kanta*. [17]

Jormanainen, V. and J. Reponen (2020), "CAF and CAMM analyses on the first 10 years of national Kanta", *Finnish Journal of eHealth and EWelfare*. [8]

MDSA2030 (2020), *Informe de Rentas mínimas de Inserción*, https://www.mdsocialesa2030.gob.es/derechos-sociales/servicios-sociales/rentas-minimas.htm. [13]

Mission Analytics Group (2011), *The Balancing Incentives Program: Implementation Manual*, https://health.maryland.gov/mmcp/longtermcare/MFP%20BIP/BIP%20Documents/Balancing%20Incentive%20Program%20Manual.pdf (accessed on 17 May 2022). [16]

New Zealand (2015), *More effective social services*, The New Zealand Productivity Commission – Te Kōmihana Whai Hua o Aotearoa, https://www.productivity.govt.nz/assets/Documents/8981330814/social-services-final-report.pdf (accessed on 16 May 2022). [15]

OCDE (2008), *Promoting performance: using indicators to enhance the effectiveness of subcentral spending*, https://www.oecd.org/tax/federalism/40832141.pdf. [14]

OECD (2022), *Designing and delivering public services in the digital age*, OECD Publishing, Paris, https://doi.org/10.1787/e056ef99-en. [12]

OECD (2022), *Modernising social services in Spain: Designing a new national framework*, https://doi.org/forthcoming. [5]

OECD (2022), *Provision od social services in EU countries*, https://doi.org/forthcoming. [6]

OECD (2020), *The OECD Digital Government Policy Framework - Six Dimensions of a Digital Government*, OECD Publishing, Paris. [2]

OECD (2019), *The Path to Becoming a Data-Driven Public Sector*, OECD Digital Government Studies, OECD Publishing, Paris, https://dx.doi.org/10.1787/059814a7-en. [3]

OECD (2015), *Health Data Governance: Privacy, Monitoring and Research*, OECD Health Policy Studies, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264244566-en. [4]

OECD (2014), *Recommendation of the Council on Digital Government Strategies*, https://www.oecd.org/gov/digital-government/Recommendation-digital-government-strategies.pdf (accessed on 16 September 2021). [1]