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Data-Driven Reconstruction: Toward National Data Governance to Support Spatial and Service Planning

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Abstract: This paper examines the foundational role of data governance in Syria's post-conflict reconstruction, arguing that data constitutes the "silent engine" driving effective spatial planning, service delivery, and institutional recovery. Following the political transition of December 2024, Syria faces the unprecedented challenge of rebuilding physical infrastructure devastated by more than a decade of civil war while also building the data architecture needed for evidence-based governance. The World Bank estimates reconstruction costs between $140 billion and $345 billion, yet without reliable, integrated, and accessible data, these resources cannot be allocated efficiently or equitably. This paper synthesizes insights from data governance literature, examines Syria's current data infrastructure landscape—including the National Data Center, the environmental data integration system, and emerging geospatial initiatives such as the Aleppo Damage Assessment Report and the Syria ReMapping project and proposes a comprehensive national data governance framework uniquely tailored to Syria's conditions. The framework addresses four interconnected pillars: foundational data infrastructure, legal and regulatory frameworks, institutional capacity and coordination, and open data for innovation and accountability. The paper concludes that Syria's data governance transformation, while fraught with challenges related to data fragmentation, institutional weakness, and technical capacity gaps, represents a strategic opportunity to build a more transparent, efficient, and inclusive state. Key recommendations include prioritizing the completion and interoperability of core national registries, conducting a comprehensive population census, establishing clear data protection and sharing protocols, investing in geospatial data infrastructure, and leveraging the Syrian diaspora's technical expertise.

Keywords: Data Governance; Post-Conflict Reconstruction; Spatial Planning; E-Government; National Data Center; Geospatial Data; Open Data; Service Delivery; Evidence-Based Policy.

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1. Introduction

Syria's post-conflict reconstruction is one of the most complex state-building challenges of the twenty-first century, not only because of the extraordinary level of physical destruction, but also because of the profound disruption of the information systems necessary to understand, manage, and respond to that destruction [1]. With the political transition of December 2024, the country entered a new phase in which rebuilding homes, schools, hospitals, roads, water networks, energy systems, and public institutions could not be separated from rebuilding the data infrastructure that enables governments and communities to make informed decisions. In this context, data should not be regarded as a technical resource or an administrative by-product. It is better understood as the "silent engine" of reconstruction: an underpinning resource that enables spatial planning, determines where public investment should be directed, identifies vulnerable communities, supports monitoring of reconstruction projects, and creates the evidence needed for transparent and accountable governance. The World Bank [24] estimates reconstruction costs at $140 billion to $345 billion, underscoring the high financial stakes. More recent estimates put the reconstruction cost at around $216 billion, with about $82 billion spent on infrastructure repair alone. But without trustworthy, interoperable information systems, even large financial resources can be distributed inefficiently, duplicated across institutions or channeled to less urgent areas. The scale of the destruction in Syria makes this information challenge all the more significant. Official reporting in Aleppo alone has recorded 24,262 homes destroyed, 24,606 partially destroyed and 105,408 lightly damaged [2]. The education sector has also been hit hard, with 227 schools reported destroyed and 215 partially damaged. Elsewhere in the country, similar patterns of destruction are observed, but information availability and quality vary widely between governorates. Thus, reconstruction should not be based on traditional engineering assessments made after selecting specific projects [3].

Decision makers need continuously updated datasets linking physical damage with population movements, land ownership, access to services, socio-economic vulnerability, infrastructure networks, environmental conditions and local development priorities. This is why today's reconstruction increasingly has become, as Enab Baladi [4] notes, not only a question of "cement and iron" but also a "battle of data." The ability to produce a credible picture of ground conditions can determine whether reconstruction policies respond to real needs or replicate existing inequalities and institutional inefficiencies [5]. Data then is a strategic resource in the reconstruction cycle. Population data tells us where schools, hospitals, housing and transport services are most urgently needed. Damage assessments can identify infrastructure that poses immediate safety hazards. Property and cadastre information can support Housing, Land and Property claims and reduce the risk that reconstruction will create new disputes. Economic and labour-market data can help steer investment to areas where jobs are likely to be created, and environmental information can help avoid rebuilding in places that are prone to pollution, flooding, drought or other hazards. Data in recovery, says Mohammad Tawfiq Nahlawi, are a "strategic compass", something that can reduce waste, improve resource allocation and promote fairness in service provision [7]. This description is especially apt to Syria, where reconstruction decisions will necessarily involve competing priorities and finite resources. Reliable evidence does not remove political choices, but it makes them more visible, comparable and defensible. Recent developments suggest that Syria has begun laying some of the technological foundations for this transition. The National Data Center, expanded government cloud services, and the implementation of digital signature systems are key components of an overall digital-government architecture. Reports indicate that the national digital transformation strategy through 2030 is divided into three phases, with the 2025 to 2027 transition period focusing on interactive public services and database connectivity. These initiatives matter because digitising individual government processes alone is not enough to build a functioning data-governance system [6].

Ultimately, ministries need to share information securely through common technical standards, identifiers, metadata structures and clearly defined responsibilities. If each ministry maintains its own database in the digital system, it can only replicate administrative fragmentation electronically rather than overcome it. Fragmentation is one of the greatest hurdles to effective data governance. Years of conflict have produced datasets held by ministries, local authorities, humanitarian organisations, international agencies, civil-society groups, research institutions and private actors [8]. These datasets may have varying geographic boundaries, definitions, collection periods, classification systems, coordinate systems, and verification levels. In some cases, the information may be outdated; in others, multiple organizations may hold overlapping datasets that report different Figures 1 and 2 for the same phenomenon. Katru [2] therefore argues that the problem is not a lack of information but its fragmentation and, in some instances, its ambiguous reliability. The Humanitarian OpenStreetMap Team [7] also emphasises the need for coordinated, community-driven approaches to geospatial information. Therefore, one objective of national data governance should be to establish mechanisms to catalogue, assess quality, standardise and exchange dispersed information, without requiring one institution to store all datasets. Special attention should be paid to developing core national registries. Reliable population, address, business, land, building, infrastructure and public-service registries could serve as common reference points across government. Their interoperability would enable information collected for one administrative purpose

to support other legitimate public functions, reducing repeated requests for the same information from citizens. A full population census is especially relevant because demographic changes have occurred over more than thirteen years of conflict, including displacement, migration, return, mortality and shifts in settlement patterns [9]. “Pre-war population estimates can’t be a sound basis for present infrastructure planning.” A more recent census, along with household surveys and administrative data, would help to build a more credible picture of where people live, their socio-economic circumstances and their access to basic services [10].

However, census and registry development must include safeguards to prevent the misuse of sensitive personal information against displaced persons, returnees, minorities or other potentially vulnerable populations [11]. Therefore, Syria’s emerging data architecture should be accompanied by an appropriate legal and regulatory framework. Data governance is not simply about building servers, cloud platforms and databases. Clear rules must define who can collect information, how it can be used, how long it can be kept, when it can be shared, and what rights people have over information about themselves. In post-conflict settings, privacy and data protection matter especially because personal information can reveal property claims, histories of displacement, family relationships or other sensitive circumstances. At the same time, overly restrictive rules could hinder legitimate information sharing and recreate institutional silos [12]. The aim should be to create a proportionate framework for distinguishing between personal, confidential, security-sensitive, administrative and genuinely open information. This system should include data-sharing agreements, access controls, anonymisation procedures, cybersecurity standards, audit mechanisms, and transparent procedures for correcting inaccurate records. Institutional capacity also matters. Advanced technical platforms cannot substitute for agencies that lack trained personnel, clear mandates or coordination mechanisms. Syria needs professionals skilled in database administration, statistics, GIS, remote sensing, cybersecurity, data science, artificial intelligence, records management and data-protection compliance. Public administrators who can use evidence to guide budgeting, procurement, planning and policy evaluation are also vital. Capacity building should therefore go beyond specialist information-technology departments. Universities can play an important role in expanding relevant educational and professional programs. [13]

Partnerships with international institutions can provide technical assistance and opportunities for knowledge transfer [14]. The Syrian diaspora is another potentially rich source of expertise. Syrian engineers, researchers, software developers, planners, and data specialists could contribute internationally through temporary placements, remote technical collaboration, training programs, research partnerships, and advisory networks, without necessarily requiring permanent return. Geospatial information is especially important in this emerging system because most reconstruction decisions have an explicit spatial dimension. Integrating satellite imagery, drone surveys, terrestrial photographs, cadastral records, infrastructure maps, and field assessments into GIS platforms enables damage identification and reconstruction monitoring [15]. Examples of how spatial data can sharpen patterns of destruction and recovery include the Aleppo Damage Assessment Report and the Syria ReMapping project. High-resolution imagery combined with artificial intelligence may also allow rapid building-level damage classification, change detection and structural assessment. However, automated outputs should not be considered authoritative. Variations in image quality, building types, urban density, and training data can introduce errors. A robust system should therefore include confidence scoring, expert review, field validation and mechanisms to return corrected information to the system. This combination of technological efficiency and human judgement is especially vital when assessments influence decisions regarding housing, compensation, demolition or reconstruction priorities [16]. Such capacity can build on the foundations already laid by international and local initiatives. UN-Habitat is conducting activities, with support from the Government of Japan, involving around 20 municipal administrative units in seven governorates and training about 120–180 municipal personnel in GIS, urban data management, recovery planning and Housing, Land and Property issues [17].

Finally, the Humanitarian OpenStreetMap Team [7] works to improve OpenStreetMap information and support a sustainable OSM Syria community, providing an additional model for how citizens, technical specialists, humanitarian actors and institutions contribute to shared geographic knowledge [18]. The long-term value of these initiatives will depend on whether Syrian institutions embed skills, datasets and standards, rather than relying on isolated projects dependent on external funding. Open data can also help support reconstruction by enabling investigators, businesses, journalists, civil-society groups and citizens to reuse non-sensitive public information. Publishing datasets on reconstruction expenditure, project locations, infrastructure conditions, service availability, procurement and environmental indicators could improve accountability and help independent actors to identify disparities or inefficiencies [19]. Open geospatial information could also stimulate applications in logistics, transport, property services, agriculture, disaster-risk management and urban development. Openness, however, does not mean indiscriminate publication. A national open-data policy should set out classifications, licensing arrangements, metadata requirements, quality standards, and procedures for excluding information that could pose legitimate privacy or security risks if released. Experience from other post-conflict environments also suggests that Syria should not succumb to the temptation to try to create a single, highly centralised information system before basic standards and institutional responsibilities are in place. Sustainable data governance is more likely to emerge from interoperable systems based on common standards and authoritative registries supported by clear coordination mechanisms [20]. Reconstruction partners should be encouraged to use compatible geographic identifiers, metadata, data formats and reporting standards. International organisations that produce

datasets for Syria should provide usable copies, documentation, methodologies and technical knowledge to relevant Syrian institutions, where feasible and within legal and ethical limits [21].

Otherwise, the country risks a new kind of fragmentation, where external organisations retain valuable reconstruction information that disappears when individual projects end. Ultimately, Syria's data-governance challenge is both technical and institutional, legal and political. Infrastructure needs to be rebuilt, but infrastructure alone does not guarantee good governance [22]. To have an evidence base, researchers need reliable national registries and a new population census. To link institutions, researchers need interoperability standards. To establish legitimate use, researchers need privacy and data-sharing rules. To avoid duplication, researchers need institutional coordination. Open-data mechanisms can support transparency, innovation, and public accountability [23]. Geospatial infrastructure investment must be a national reconstruction priority, as it links information directly to the places where recovery decisions are carried out. Capacity-building programs should strengthen central ministries, municipalities, universities, civil society and professional communities simultaneously. Structured engagement with the Syrian diaspora can widen the pool of available technical expertise. The key question is not whether Syria can gather more data, but whether it can turn fragmented information into a trusted national resource that improves decision-making. Without such a foundation, reconstruction may proceed, and billions of dollars may be spent [24]. Meanwhile, planners continue to work with incomplete or incompatible representations of the country's needs. If data governance is integrated from the outset, it creates an opportunity to build institutions that are more coherent, transparent, evidence-based, and responsive than those that existed before the conflict. Syria's reconstruction can therefore be seen as two parallel projects: rebuilding the country's physical fabric and building the information infrastructure through which this reconstruction can be planned, monitored, evaluated and held accountable. The success of the first will depend increasingly on the quality, availability, protection and governance of the second [16].

2. Review of Literature

Over the last two decades, data governance has evolved into a vital field of research and practice as governments are increasingly recognising data as a strategic public resource rather than only an administrative or technical asset. Fundamentally, data governance systematically manages data availability, usability, quality, integrity, accessibility, and security through the right institutional responsibilities, processes, legal structures, and technological systems. This broader understanding is especially relevant to fragile and conflict-affected settings, where digital transformation can improve institutional recovery and support better evidence-based decision-making [1]. Contemporary approaches therefore go beyond traditional database management to include issues of institutional accountability, interoperability, privacy, cybersecurity, data sharing and responsible public access. Similarly, international digital-transformation frameworks point out that effective governance requires coordinated institutions and sustainable digital infrastructure, not isolated technological investments. These theoretical principles have a direct practical relevance in Syria. Reconstruction involves different ministries, municipalities, humanitarian organisations, international agencies and local communities working from information that is sufficiently reliable and compatible to underpin common decisions [3]. Recent national initiatives on digital public services, government information systems, telecommunications infrastructure and cybersecurity show a budding awareness of this need. Syria's interest in upgrading its position in regional data-transmission networks illustrates the growing integration of data infrastructure with wider national development objectives. Data governance is even more critical in post-conflict reconstruction because conflict both increases the demand for reliable information and destroys the institutions that produce it [4].

Effective reconstruction needs current evidence on population distribution, infrastructure damage, housing, public services, economic activity, displacement and local vulnerability. Without this information, authorities risk directing limited resources to poorly identified priorities or replicating geographic and social inequalities. Data has therefore been characterised as the "silent engine" of Syria's reconstruction because it can guide planning, resource allocation and institutional coordination. But after the conflict, information is often spread across ministries, humanitarian agencies, local authorities, researchers and international organisations [5]. Different organisations may use incompatible formats, classifications, geographic boundaries or collection methodologies that are difficult to integrate. Syria therefore requires governance arrangements that enable information to be standardised, validated, shared and reused, while maintaining appropriate institutional responsibilities. Digital technologies can help reduce the long-term consequences of conflict, provided they are integrated into broader institutional recovery strategies.

Digital instruments can also help enhance partnerships between government and private actors in reconstruction. Investments in telecommunications, including international connectivity projects, also support the infrastructure needed for such an integrated environment [6]. Geospatial data is a key component of this governance system because reconstruction problems are inherently spatial. Geographic Information Systems, satellite imagery, drone surveys, field observations, cadastral information and infrastructure databases can illustrate where destruction has occurred, where populations and services are concentrated and where reconstruction interventions are most urgent. Damage assessment in Aleppo shows how systematic mapping of damaged

housing and infrastructure can define reconstruction priorities. Community-based mapping can complement official information with local knowledge and improve coverage in areas where institutional datasets remain incomplete [7].

An example of such a participatory model is the Syria ReMapping initiative, which links Syrians both in the country and in diaspora communities to enhance openly accessible geographic information. Such initiatives are particularly valuable when linked to institutional capacity building. International support to municipalities, such as programs involving GIS, urban data management, recovery planning and Housing, Land and Property issues, shows how geospatial technology can be integrated into local administrative development rather than treated as a mapping exercise. At the same time, growing data collection raises important questions about privacy, security and public trust [8]. Data protection is particularly sensitive in post-conflict societies, as records may contain information about identity, displacement, property ownership, family relationships, or other circumstances that could put individuals at risk if accessed or reused improperly.

Syria's Law No. 12 of 2024 on electronic personal data protection provides an important legal basis for regulating the collection, processing and use of personal information [9]. But legislation alone does not guarantee protection. Successful implementation requires institutional oversight, cybersecurity capabilities, clear responsibilities for data controllers, appropriate access controls, and the practical application of principles such as data minimisation and purpose limitation. Concerns beyond Syria's digital future also show the close relationship between connectivity, rights, institutional trust and responsible digital development. Cybersecurity efforts in sensitive sectors such as banking further illustrate the need to protect growing digital systems. Open data complements this by giving researchers, citizens, businesses, civil-society organisations, and technology communities access to and the ability to reuse non-sensitive government information [10].

If properly governed, open data can increase transparency, let citizens monitor reconstruction, spur innovation and enable independent analysis of public policy. Community-led geospatial activities already show how openly available information supports collaborative reconstruction planning. SANA [12] argues that expanding Syria's digital and innovation ecosystem, including technology events, education, research and investment, could increase the economic value generated by responsibly accessible information. Openness must, however, be compatible with privacy, security, data quality, and institutional accountability, and should not be interpreted as unrestricted publication. The literature therefore reveals a significant gap between the general data-governance models and the specificities of post-conflict Syria [11]. Most existing frameworks presume fairly stable institutions, trustworthy administrative records, and developed technical capacity. None of these can be assumed in a country emerging from long-term conflict. Syria needs a comprehensive strategy that integrates digital infrastructure, institutional capacity, geospatial information, privacy safeguards, interoperability and responsible open data. New studies on digital investment in Syria also point to correlations among technology transfer, institutional trust, investment quality, and risk governance [14]. Syria cannot simply replicate governance models from stable, wealthy countries. Its framework must absorb fragmented information, unequal institutional capacity, the urgency of reconstruction, international community participation, community participation and the technical expertise of its diaspora. By addressing these interlinked dimensions, data governance could evolve from a technical administrative function to a fundamental mechanism for transparent, inclusive, and evidence-based reconstruction.

3. Methodology

This paper uses a qualitative policy-analysis and conceptual-synthesis methodology, drawing on multiple evidence sources. These include official Syrian government statements and policy documents; reports from international organizations, including the United Nations and the World Bank; industry publications and media reports; academic literature on data governance, post-conflict reconstruction, and geospatial information systems; and analyses from think tanks and research institutions. The analysis is primarily documentary and interpretive, synthesizing disparate sources into a coherent framework to understand and guide Syria's data governance transformation. This paper focuses on the data governance dimensions of Syria's reconstruction. While acknowledging data governance's interdependence with other policy areas—particularly digital transformation, cybersecurity, and service delivery—the paper focuses on its infrastructure, legal, institutional, and open data dimensions. The temporal scope runs from the December 2024 political transition through the present in August 2026.

3.1. Syria's Data Infrastructure: Current State and Trajectory

3.1.1. The National Data Center

The National Data Center is the cornerstone of Syria's data infrastructure strategy. Described as "one of the most important pillars of infrastructure," the center has been completed and is fully operational. The center serves as the central repository for government data, enabling data integration across ministries and agencies. The National Data Center is part of a broader digital infrastructure ecosystem that includes government cloud services, digital signature systems, and national interoperability frameworks.

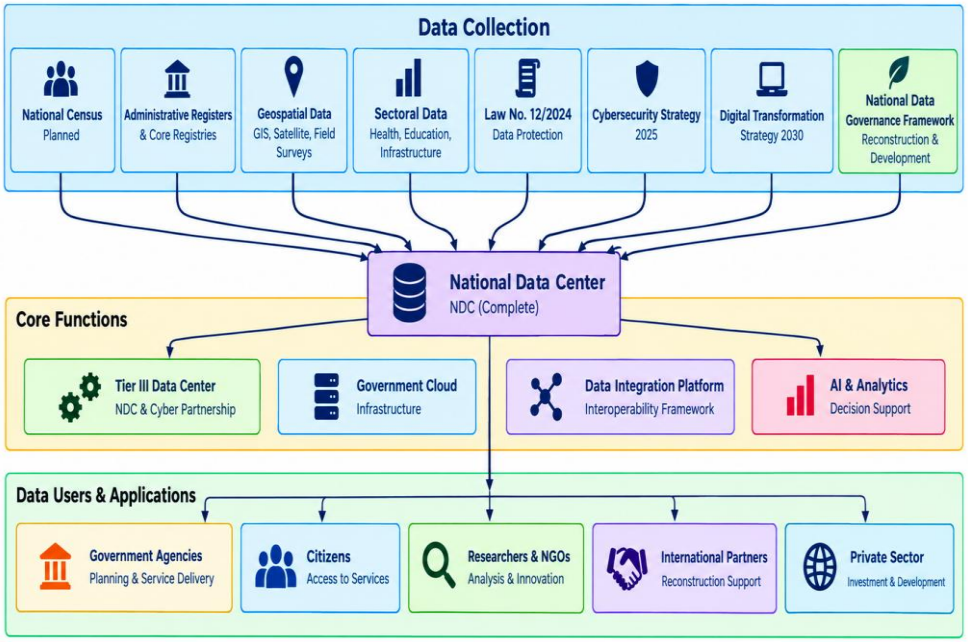


Figure 1: Syria's data infrastructure ecosystem

The government has reported completing a government data integration platform linking state institutions. The Security Information and Event Management (SIEM) system, which serves as the nucleus of a Security Operations Center, is 90% complete. Syria's first Tier III data center, established through a partnership between Syrian company MDC and Saudi cybersecurity firm Cypher, marks a significant step forward. According to Nahlawi, this partnership "goes beyond being a commercial or technical agreement" and represents "a foundational step toward building a national digital infrastructure capable of supporting digital transformation, strengthening information sovereignty, and preparing the country for a data-based economy".

3.1.2. Core National Registries

The National Digital Transformation Strategy envisions a national database comprising at least eight government registries: civil registry, vehicle registry, family card registries, electronic registry, support registries, migration and passport registries, commercial registry, industrial registry, and a general registry of state employees. Interoperability among these registries is a key priority. Significant progress has been made in digitizing these registries. The government has reported progress on commercial and industrial registries, as well as the government electronic data transfer system, which is 50% complete. The Ministry of Interior has committed to digitizing all services by March 2026, with electronic applications enabling citizens to obtain documents from home. The Ministry of Local Administration and Environment has launched a digital transformation plan aimed at "effective decentralization and electronic systems that save time and procedures for citizens and ministry and municipality employees alike". The plan includes seven axes, with the seventh axis targeting "debris and waste management and recycling, including waste sorting and determining quantities and ways to benefit from them". Table 1 summarizes the status of Syria's core national registries and data infrastructure components.

Table 1: Status of Syria's core national registries and data infrastructure

Component	Status	Responsible Entity	Notes
National Data Center	100% Complete	Ministry of Communications	Central repository for government data
Government Cloud Services	Continuous Expansion	Ministry of Communications	Hosting multiple government services
Digital Signature System	Operational	Ministry of Communications	Needs further development
Citizen Service Centers	Operational	Multiple Ministries	Expanded service channels

Government Procurement Platform	100% Complete	Ministry of Finance	Electronic tenders and bids
Government Data Transfer System	50% Complete	Ministry of Communications	Electronic data exchange
SIEM / Security Operations	90% Complete	Ministry of Communications	Nucleus for SOC
"Wajib" Complaints Platform	100% Complete	Ministry of Communications	Pending launch
Civil Registry	In Progress	Ministry of Interior	Digitization ongoing
Commercial Registry	In Progress	Ministry of Economy	Significant progress
Industrial Registry	In Progress	Ministry of Industry	Significant progress

Syria has built a legislative and regulatory framework that supports data governance and digital transformation. Several laws and plans cover data protection, cybersecurity, cloud computing and digital transformation. A key development is Law No. 12 of 2024 concerning Electronic Personal Data Protection, adopted in March 2024, which aims to protect citizens' data privacy and regulate the collection, processing and use of personal data online. The law imposes fines of up to 12 million Syrian pounds and prison terms of up to three years, and it establishes a specialised authority to oversee data sharing. The National Cybersecurity Strategy, adopted in June 2023, complements this law by providing a framework to protect digital infrastructure from cyberattacks and by highlighting the need to improve digital security in financial applications and bolster cybersecurity awareness and training. The National Cloud Computing Policy, released in December 2022, sets out principles for government usage of cloud technology, with a special focus on security, interoperability and data sovereignty. Moreover, the Digital Transformation Strategy 2021-2030 provides an overarching framework for digital development, with data governance recognised as a key component. The strategy is divided into three phases: a first stage to establish the foundations, with an emphasis on infrastructure and legislation; a transitional phase between 2025 and 2027, focused on deploying interactive digital services; and a final phase between 2027 and 2030, aimed at greater integration and data-driven governance. With these policies in place, various data governance efforts are underway. Feb 2026: The Ministry of Social Affairs and Labour, in collaboration with international organisations such as the World Bank, World Food Programme, UNICEF, and International Labour Organization, held a high-level technical workshop on data governance and social protection in Syria.

The workshop focused on developing data governance frameworks for social protection systems, data mapping, data protection, data sharing, interoperability and cooperation among key agencies. Minister of Social Affairs and Labour Hind Kabawat stressed the need for a unified national framework with clear rules and institutional responsibilities. At the same time, Minister of Finance Mohammad Yasser Barnieh emphasised the need to use accurate, reliable data to inform investments in key sectors, including health and education. Despite these improvements, Syria continues to grapple with serious hurdles in developing an efficient data governance framework. One key problem is data fragmentation: information is scattered across institutions, collected under different standards and procedures, and stored in incompatible formats. Previous studies show that the problem is not only the absence of data but also data fragmentation and the varying reliability of accessible datasets. Another important limitation is institutional capacity. A gap exists between technical capacity to store and process information and institutional capacity to produce reliable data and use it effectively in decision-making. Another limiting factor is a shortage of human resources, especially data scientists, analysts, GIS specialists and other technical personnel. Years of conflict and instability in the education system have restricted access to quality technical education and contributed to the shortage of specialised skills. Data quality remains an issue, as many existing datasets are obsolete, fragmentary, inconsistent or collected using different approaches, making them difficult to use to build a comprehensive, reliable understanding of reconstruction needs. Gaps in coordination between institutions further hinder data integration and the establishment of an integrated national governance framework. Public trust may also be a key barrier, since the previous regime's history of widespread monitoring may fuel concerns about government data gathering and reduce citizens' willingness to participate in data-generation activities.

Geospatial data is particularly important for Syria's reconstruction, as it provides the geographical framework for damage assessment, infrastructure planning, resource allocation, demographic analysis, and public-service delivery. As the Syria ReMapping project notes, reliable, up-to-date geospatial information is essential for recovery planning. Demand has grown as many Syrians return to the country. A UNHCR-related assessment reported that over one million people had returned to Syria by September 2025, and more returns were projected if conditions improved and reconstruction intensified. Without proper spatial information, restoring houses, schools, health care facilities, infrastructure and livelihoods may remain wasteful, poorly targeted and regionally unfair. A leading example of evidence-based rehabilitation planning is the Aleppo Damage Assessment Report published in March 2026 by Syria's Ministry of Local Administration and Environment, in partnership with UN-Habitat. Based on months of field surveys and technical studies, the assessment produced comprehensive maps of infrastructure damage across Aleppo Governorate, documenting impacts on roads, electricity, water, sanitation, telecommunications, administrative units, debris locations, and local economic activity. The ministry noted that the data will be the primary reference for prioritising recovery actions and focusing resources on the most severely affected communities. The assessment shows the scale and complexity of the spatial reconstruction needs: in the health sector, two hospitals were destroyed, one was partially damaged, two were moderately damaged, and four were lightly damaged, while 12 clinics were destroyed, 19 partially damaged, 39 moderately damaged, and 28 lightly damaged. In the education sector, 227 schools were destroyed, 215 were partially damaged,

480 were moderately damaged, and 555 were lightly damaged. The housing evaluation revealed 24,262 dwellings fully destroyed, 24,606 partially damaged, 24,857 moderately damaged, and 105,408 lightly damaged. Houses of worship were also heavily damaged: 258 mosques were demolished, 229 were slightly damaged, 273 were moderately damaged, and 358 were lightly damaged (Figure 2).

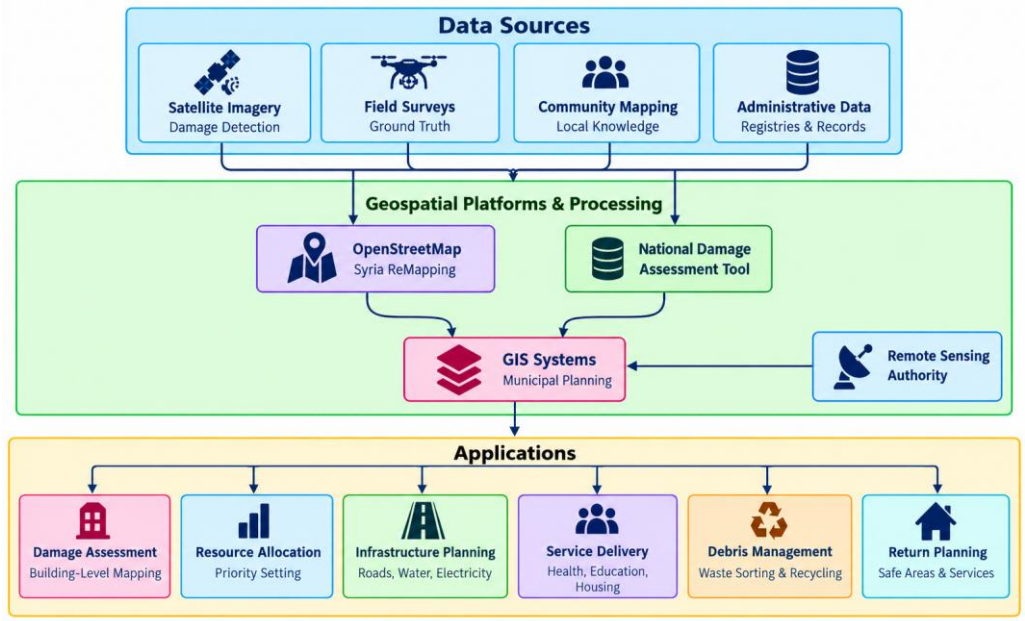


Figure 2: Geospatial data for reconstruction planning

Similar assessments are allegedly being prepared for other governorates, which could help build a more comprehensive national picture of conflict-related damage. The Syria ReMapping initiative illustrates another way geospatial data can help fill persistent knowledge gaps by combining large-scale mapping, open data, and community participation. Led by the Humanitarian OpenStreetMap Team [7] in collaboration with the H2H Network, the initiative aims to improve geospatial data, build local mapping capacity and ensure reconstruction planning is based on accurate, locally relevant and openly available data. The paper found substantial deficiencies in building, road, populated-place, and community-service data. Building information was insufficient across OpenStreetMap and machine-learning derived datasets. The most complete automated sources were expected to lack roughly one quarter of buildings countrywide. Many rural and peri-urban areas also have incomplete road networks, particularly in surface type and connectivity. Villages, communities and locally known place names were inconsistently portrayed, mainly in Rural Aleppo, Rural Damascus and northern Syria.

Moreover, information on key community services and cultural sites, such as schools, health care facilities and community centers, was needed to support informed decisions about return and recovery. The enthusiasm of over 100 Syrians willing to contribute to OpenStreetMap Syria shows participatory mapping's potential to supplement institutional data collection. The initiative also included people in the Syrian diaspora, who might use mapping to reconnect with their communities and motherland. The program can help fill data shortages by engaging contributors inside Syria and throughout the diaspora, while encouraging broader community participation and collective ownership of reconstruction information. Overall, Syria's nascent legal and institutional framework, alongside national data governance initiatives, precise damage assessments and community-led geospatial mapping, provides a vital basis for data-driven restoration. However, overcoming ongoing fragmentation, limited institutional capacity, a lack of specialised human capital, uneven data quality, weak inter-institutional coordination and issues around public trust is necessary for these systems to support transparent, equitable and evidence-based reconstruction planning.

3.1.3. Capacity Building in Geospatial Data

Building institutional capacity in geospatial data is essential for sustaining reconstruction efforts. The UN-Habitat project, supported by the Government of Japan, is training 120 to 180 municipal staff in key areas, including Geographic Information Systems (GIS), urban data management, recovery planning, and Housing, Land, and Property rights. The paper supports about 20 municipal administrative units across seven governorates—Aleppo, Rural Damascus, Homs, Hama, Latakia, Idleb, and Daraa—strengthening their institutional, technical, and operational capacities to plan recovery effectively and improve service delivery. The Syrian Remote Sensing Authority continues to implement studies to support sustainable development plans and

reconstruction. The authority's work includes damage assessment, environmental monitoring, and infrastructure planning (Figure 3).

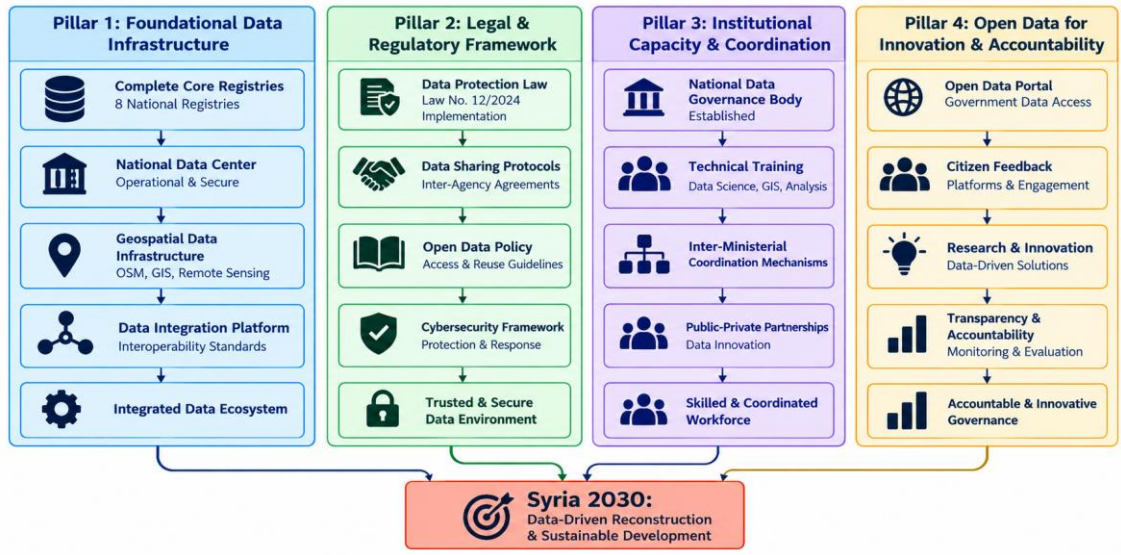


Figure 3: Comprehensive national data governance framework

Recent developments have occurred, but Syria still faces major challenges in establishing and maintaining functioning geospatial data systems. Significant data gaps persist, particularly in rural and conflict-affected areas where mapping has been disrupted or limited. The existing coverage gap is so large that even the most complete automated geospatial data sources are expected to miss about one-quarter of buildings nationally. The quality of available geospatial data also varies, with differences in spatial coverage, positional accuracy, completeness and timeliness limiting its utility for reconstruction planning and decision-making. Another challenge is institutional fragmentation, as numerous entities collect and store geographic information using different standards, methodologies and formats, making data integration and interoperability difficult. At the same time, Syria lacks enough skilled GIS professionals and other geospatial experts who can efficiently collect, process, analyse, update and use spatial information. Another concern is long-term sustainability. Many geospatial initiatives rely on external donor support. Sustainability of these systems beyond the life of donor-funded projects will require continued institutional commitment, domestic financial resources, technical capacity, and local ownership.

Building on those challenges and the broader conversation about Syria's data environment, a comprehensive national data governance framework can be built around four interrelated pillars: foundational data infrastructure; legal and regulatory structures; institutional capacity and coordination; and open data for innovation and accountability. The first pillar focuses on establishing the basic infrastructure needed to ensure government data is trustworthy, interoperable and secure. Syria's focus for 2025–2027 should be completing the digitisation and interoperability of the eight major government registries, including ensuring accuracy, regular updates, and access to registry information for authorised users. This approach will introduce common data quality standards, validation procedures and tools to correct incorrect or out-of-date records. Complete operationalisation of the National Data Center as a central repository of government data with adequate security, stability, redundancy, and scalability to handle the evolving needs of digital government in parallel throughout 2025–2027. Government institutions should be brought to the center gradually, through shared technology standards and secure data-interchange mechanisms. Syria should also construct a comprehensive national geospatial data infrastructure between 2026 and 2028, building on projects like the Syria ReMapping project. Such infrastructure should establish uniform standards for collecting, storing and managing metadata, quality control and exchanging geospatial data and integrate spatial information with demographic, infrastructure, economic, environmental and service-delivery statistics.

In 2027-2028, a government-wide data integration platform shall be developed to ensure secure, seamless information transmission across institutions. Adopting common data standards, application programming interfaces, interoperability protocols, and data-sharing procedures would enable government agencies to access data provided by other institutions, rather than reproducing the same data repeatedly. The second pillar addresses the legal and regulatory framework required for the responsible collection, processing, exchange, protection and provision of data. During 2025–2027, Syria should focus on implementing Law No. 12 of 2024 on electronic personal data protection, including establishing and operationalising the specialised authority responsible for regulating data exchange and developing detailed regulations, technical standards and institutional guidelines for data protection. Develop clear protocols for secure data sharing among government institutions from

2026 to 2027, underpinned by formal inter-agency data sharing agreements that set out responsibilities, permitted uses, security requirements, access rights, retention periods and accountability mechanisms. Syria needs to adopt a full open data policy to disseminate non-sensitive government information in 2027-2028. Such a strategy should set standards for anonymisation, data quality, accessibility, metadata, licensing and regular updating and provide the basis for a national open data portal. Cybersecurity should be a cross-cutting element of this legal and regulatory pillar over 2025-2028. Syria should enhance its cybersecurity architecture to protect government databases, data centers, networks and digital services; and fully activate the Security Operations Center (SOC) and the Computer Emergency Response Team (CERT).

Regular cybersecurity assessments, vulnerability testing, incident response exercises and staff training should reduce risks related to rising digitalisation and inter-institutional data exchange. The third pillar is institutional capability and coordination. It recognises that technological infrastructure alone cannot achieve good data governance. You also need the right institutional structures and persons with the right skills. Syria should establish a national data governance organization in 2025-2027 to coordinate and monitor data governance across government agencies. The body should comprise representatives from relevant ministries and government agencies and, where appropriate, organised participation from civil society organisations, universities, technical specialists and the corporate sector. Its duties could include setting national data standards, resolving inter-institutional data conflicts, monitoring compliance, organising data-sharing arrangements and overseeing implementation of the national data governance system. Between 2025 and 2028, the country should also invest significantly in technical and professional training in data science, GIS, data analytics, database administration, cybersecurity, artificial intelligence and data governance. Partnerships with international organisations, universities, technology businesses and other private sector institutions can promote curriculum development, professional certification, practical training and technology transfer. Remote training, professional networks, technical advisory programs and collaborative research initiatives could provide opportunities to tap expertise from the Syrian diaspora. To increase inter-ministerial cooperation during 2025–2027, the plan will hold frequent coordination meetings, establish common information-sharing protocols, create collaborative technical working groups, and define clear institutional roles.

Extend public-private partnerships to promote data innovation, build digital infrastructure and technical services, and strengthen workforce training (2027- 2028). Such agreements could give government institutions access to specialised technological skills and incentivise the private sector to develop data-driven solutions for reconstruction and public service delivery. The fourth pillar is about using open data to encourage innovation, public participation, transparency and accountability. Syria should develop a national open data site in 2027-2028 to make non-sensitive government data available to citizens, researchers, universities, civil society organisations, journalists and entrepreneurs. High-value datasets may initially comprise rebuilding and damage-assessment data, public budgets, infrastructure data, population statistics and public-service delivery indicators. Furthermore, from 2025 to 2027, citizen feedback systems should be scaled up to include, for example, the “Wajib” complaints portal, giving citizens easy access to report concerns, assess government services and provide input on reconstruction operations. These platforms should systematically analyse the information they generate and use it to inform service improvement initiatives. Government data should increasingly support research and innovation in 2027–2030 by allowing universities, research institutions, technology companies and entrepreneurs to develop data-driven solutions to reconstruction, infrastructure, education, healthcare, environmental management and other national challenges. During this period, open data should promote transparency and accountability by giving individuals and civil society organisations (CSOs) information to oversee reconstruction projects, scrutinise public expenditure, assess service delivery and evaluate the implementation of government projects.

Several cross-cutting principles should underpin all four pillars and their implementation stages. Data sovereignty is particularly significant because Syria's data governance system should ensure that strategically important national data stays within Syrian legal and institutional authority while also protecting it against unauthorised foreign access or intervention. The declared purpose of the Tier III data center collaboration, keeping data within Syrian territory, shows how data sovereignty can be incorporated into national digital infrastructure planning. At the same time, data governance should be inclusive and designed to support all parts of Syrian society, regardless of gender, geographic region, disability or socio-economic level. This means developing data-collection tactics that reach marginalised and hard-to-access communities, and providing digital services and datasets accessible to users with varying technological capabilities and socio-economic conditions. Trust is also fundamental to the national data governance system. If citizens understand how their information is collected, protected, shared and used, they will be more willing to participate in digital services and data-gathering processes. Therefore, transparent procedures, enforceable privacy protections, and clear institutional roles and accountability mechanisms may help build public confidence. Last but not least, any data governance program must embed sustainability from the start. Projects that depend entirely on ad hoc donor funding may struggle to continue functioning when external funding is withdrawn, and Syria should develop domestic funding mechanisms, institutional ownership, local technical capacity, maintenance plans and long-term governance arrangements. Together, these four pillars and cross-cutting principles set out an integrated pathway to transform Syria’s fragmented data environment into a more interoperable, secure, inclusive and evidence-based national data ecosystem that can support reconstruction, public service delivery, economic recovery, research and long-term development.

4. Results and Discussions

4.1. Summary of Findings

This study's findings indicate that data governance is a key requirement for post-conflict reconstruction in Syria. Reliable, integrated, and accessible data directly affect government institutions' and reconstruction partners' ability to identify needs, prioritise investments, allocate funds, and evaluate recovery outcomes. Therefore, data can be called the "silent engine" of rebuilding, as decisions about population distribution, housing, schools, hospitals, infrastructure and public services are based on good information. As Nahlawi points out, you can't set reconstruction priorities without credible information on population distribution and accurate assessments of deficiencies in schools, hospitals and infrastructure. The results also underscore major advances after the political shift in December 2024, such as the creation of the National Data Center, the expansion of government cloud services, the introduction of digital signature technologies, and new data-governance projects.

The Aleppo Damage Assessment Report is a strong model for evidence-based planning, and the Syria ReMapping initiative highlights the importance of community-driven mapping in addressing geospatial gaps. The results also indicate that advances in digital infrastructure have not alleviated fundamental data-governance restrictions. Data remain dispersed among institutions, and dataset quality and format vary, as does institutional capacity to generate and use reliable information. Shortages of GIS specialists, data scientists, analysts and data-management professionals inhibit the effective application of technology." These data suggest that infrastructure investment alone is not enough. As digital infrastructure is built up, so too must be interoperability, institutional coordination, data-quality standards, technical skills and accountability systems.

The legal and regulatory framework is an important basis, but its efficacy depends on execution, enforcement, defined institutional roles, secure data-sharing processes, and practical technical standards. Geospatial data was a particularly crucial outcome, because reconstruction is essentially spatial. Damage location, severity and distribution inform resource allocation. Population vulnerability, service accessibility and infrastructure connectivity inform response urgency and predicted benefit. The Aleppo Damage Assessment Report documents damage to homes, education, health, roads, energy, water, sanitation and telecommunications. The Syria ReMapping project offers an alternative to official assessments by expanding spatial coverage through open, community-driven mapping. Taken together, these surveys show that combining field surveys, remote sensing, government records, GIS databases, and community-based information provides a more robust evidence base than relying on a single data source. To translate these findings into quantitative decision support, this study proposes a Data Governance Readiness Index (DGRI): DGRI = 0.25I + 0.25Q + 0.20S + 0.15C + 0.15H, where I is interoperability, Q is data quality, S is security and legal compliance, C is institutional coordination, and H is human-capital capacity. Every component is scored from 0 to 100. Researchers may develop a supplemental score to support prioritising geographical reconstruction as $P_i = w_1D_i + w_2V_i + w_3G_i + w_4R_i$, where D_i denotes damage severity, V_i the population vulnerability, G_i the service or infrastructure shortfall, and R_i the predicted reconstruction benefit. The equations are visible analytical structures, not hard-and-fast decision rules; test weights against field evidence and consult interested parties. The findings suggest a four-pillar national data-governance framework: fundamental data infrastructure; legal and regulatory structures; institutional capacity and coordination; and open data for innovation and accountability.

Core registries: complete foundational infrastructure; operationalise the National Data Center; develop national geospatial infrastructure; and build an interoperable integration platform. The legal pillar should focus on implementing data-protection regulations, enabling secure inter-agency collaboration, setting open-data standards, and strengthening cybersecurity. The institutional pillar should develop national coordination mechanisms and invest in GIS, data science, analytics and data management skills, including involvement with the Syrian diaspora. The open-data pillar should drive adequately protected datasets, citizen feedback, research, innovation and transparency. These pillars are interdependent: open data depends on reliable infrastructure and safeguards, and infrastructure provides public value only if institutions can govern and use it efficiently.

The discussion also cites data sovereignty, inclusivity, trust and sustainability as cross-cutting requirements. Sensitive information should be protected, and national data systems should remain under adequate Syrian institutional and legal oversight. Inclusion requires collection methods and services that reach individuals across varied geographic, socio-economic, and accessibility conditions. Transparency in how data is acquired, secured, shared and used is essential to trust. Sustainability needs domestic financing, institutional ownership, local technical skills, maintenance arrangements, and long-term planning beyond donor-funded programs. Overall, the results suggest that Syria's reconstruction needs a move from fragmented datasets to an integrated data ecosystem where geospatial, demographic, infrastructure, economic, and service-delivery information can be securely linked and used for evidence-based decisions. The discussion thus confirms that data governance should be seen as a basic element of reconstruction strategy, not just as a supporting activity of digital government.

Table 2: Summary of major results

Finding	Evidence/Observation	Discussion
Data is foundational	Reconstruction decisions depend on population, infrastructure and service data.	Reliable data improves targeting and resource allocation.
Geospatial data is critical.	Damage and service gaps vary by location.	GIS supports spatial prioritization and infrastructure planning.
Digital capacity is expanding.	National data and digital-government initiatives are progressing.	Existing infrastructure provides a basis for integration.
Governance gaps persist	Fragmentation, uneven quality and weak coordination remain.	Technical investment must be combined with governance reform.
Human capacity is limited.	Shortages exist in GIS, analytics and data management.	Long-term training and capacity building are required.

Table 2 summarises the study's main findings and links them to practical implications for Syria's restoration process. The results show that data is a core resource for rebuilding, as credible information on population, infrastructure and services is needed for optimal planning and resource allocation. Table 2 also shows the relevance of geospatial data, especially in detecting the geographic spread of damage and service gaps. Significant challenges include data fragmentation, variable data quality, institutional coordination problems and lack of technological skills, which continue to hinder progress in establishing digital infrastructure. The results thus emphasise the need to complement investments in physical and digital infrastructure with improvements in governance, institutional coordination, data standards, and human-capital development.

Table 3: Key indicators for reconstruction data prioritization

Indicator	Example Measure	Purpose
Damage severity	Destroyed or damaged assets	Identify urgent reconstruction needs.
Population vulnerability	Population exposed or underserved	Prioritize areas with greater social need.
Service gap	Distance or capacity deficit for key services	Identify inadequate access.
Infrastructure connectivity	Road, water, electricity and telecom availability	Assess system-wide effects.
Expected benefit	Estimated improvement from intervention	Support efficient resource allocation.

Table 3 shows the key indicators used to inform evidence-based prioritisation of reconstruction efforts. Damage intensity shows the extent of physical destruction, and population vulnerability shows where communities face greater social and economic exposure. The service-gap indicator helps find places where access to critical services, such as health care, education, water and power, is lacking. Infrastructure connectivity helps explain how individual rebuilding projects can affect transportation and utility networks. Finally, predicted benefit helps select actions likely to produce the greatest improvement given the available resources. Together, these indicators provide a multi-dimensional approach to rebuilding prioritisation, rather than focusing only on the physical magnitude of damage.

Table 4: Recommended implementation priorities

Priority Area	Period	Key Action	Expected Result
Foundational infrastructure	2025–2028	Registries, data center, geospatial infrastructure and integration	Interoperable national data environment
Legal and cybersecurity	2025–2028	Data protection, sharing rules and security controls	Secure and accountable exchange
Institutional capacity	2025–2028	Governance body, training and coordination	Stronger data-management capacity
Open data and accountability	2027–2030	Open-data portal, citizen feedback and research access	Transparency, innovation and participation

A phased implementation plan for enhancing Syria’s national data-governance system (Table 4). The results point to four critical areas – basic data infrastructure, legal and cybersecurity systems, institutional capability, and open data and accountability. Improvements to government registries, the National Data Center, geospatial infrastructure and data integration mechanisms should build foundational infrastructure during 2025-2028. Legal and security precautions must balance protection with responsible information sharing. Institutional capacity building is essential to acquire the technical skills and coordination mechanisms needed to operate these systems effectively. Finally, open-data and accountability measures planned for 2027–2030 can improve transparency, stimulate innovation, assist research and bolster public participation. Thus, the chart shows

that data governance needs to be addressed in a coordinated, progressive manner, not as a series of individual technology projects.



Figure 4: Syria's integrated national data governance framework for post-conflict reconstruction

Figure 4 proposes an integrated national data-governance structure, showing how four interrelated pillars support evidence-based reconstruction. Foundational data infrastructure: The first pillar provides the technical groundwork for collecting, storing, integrating and accessing reliable information. The second pillar, legal and regulatory structures, provides the regulations for data protection, sharing, cybersecurity and responsible use. The third pillar, institutional capacity and coordination, concerns the need for qualified individuals, clear duties and cooperation among government entities. The fourth pillar, open data, innovation and accountability, is about making the right non-sensitive data available to researchers, citizens, entrepreneurs and civil society. Together, these four pillars support the fundamental goal of evidence-based reconstruction. The image also lists data sovereignty, inclusion, trust, and sustainability as cross-cutting principles, meaning these considerations should guide every element of the national data-governance system.

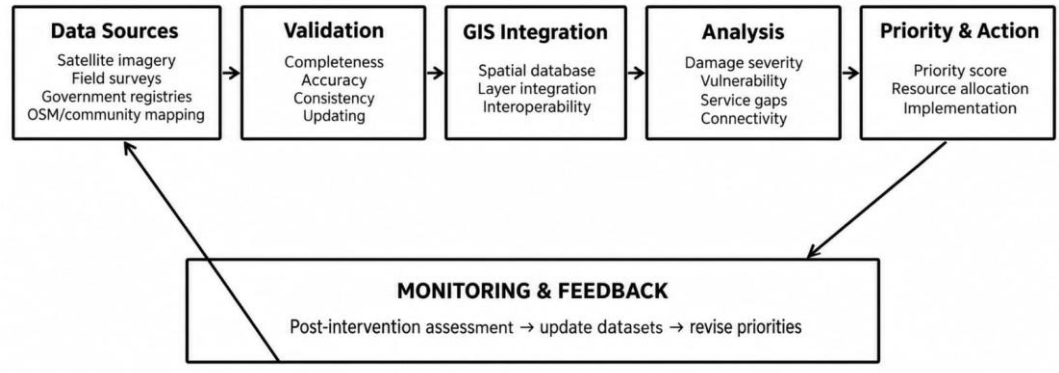


Figure 5: Geospatial data-to-decision workflow for prioritising reconstruction

Figure 5 shows how geographical information is transformed into actionable reconstruction decisions. The procedure begins with multiple data sources, including satellite imagery, field surveys, official registries and community-generated OpenStreetMap data. These datasets must first be validated for completeness, accuracy, consistency and timeliness. Once confirmed, GIS integrates the information into a spatial database, enabling aggregation and analysis across multiple datasets. The analytical stage examines damage severity, population susceptibility, service gaps and infrastructure connectivity. These characteristics can then be used to generate a reconstruction priority score to guide resource allocation and intervention planning. The last stage is implementation, followed by monitoring and feedback. The new information from the completed

interventions can then be sent back into the system. It is a continual cycle of data collection, analysis, decision-making, and improvement. This workflow illustrates how geospatial data might facilitate a more transparent, systematic and evidence-based reconstruction effort in Syria.

5. Conclusion

Syria's data governance transformation represents both an immense challenge and an unprecedented opportunity. The challenge lies in the scale of destruction, data fragmentation, weak institutions, and limited technical capacity. The opportunity lies in the potential to build a more transparent, efficient, and inclusive state; enable evidence-based reconstruction; and position Syria as a leader in data-driven governance in the region. The foundation for this transformation is being laid. The National Data Center, the Tier III data center, the Aleppo Damage Assessment Report, and the Syria ReMapping project tangibly demonstrate a commitment to data-driven reconstruction. The legal and regulatory framework, including data protection and cybersecurity legislation, provides a foundation for data governance. The February 2026 workshop on data governance signals growing recognition of this issue's importance. However, infrastructure and legislation alone are insufficient. As Nahlawi observes, "a data center, no matter how advanced, does not create value on its own. Value is achieved when data is translated into knowledge, and knowledge into policies." The success of Syria's data governance transformation will ultimately depend on institutional quality, the depth of human capital, and the effectiveness of efforts to build trust and ensure inclusion. The path forward requires strategic sequencing, careful attention to governance and inclusion, and a commitment to learning from both successes and failures in other contexts. The comprehensive framework proposed in this paper—addressing foundational infrastructure, legal frameworks, institutional capacity, and open data—offers a roadmap for this transformation. Syria's data governance is not merely about technology; it is about rebuilding the social contract between state and citizen, creating opportunities for a generation that has known only conflict, and ensuring reconstruction serves all Syrians equitably. As one observer notes, "reconstruction in the 21st century is no longer merely a battle of cement and iron—at its core, it has become a battle of data." Syria's ability to win this battle will determine not only its digital future but its broader trajectory of recovery and development.

5.1. Limitations and Future Research

This paper has several limitations. The analysis relies on publicly available sources and may miss relevant developments, particularly those not reported in international media. Syria's rapidly changing political and economic situation means some findings may quickly become dated. The paper focuses primarily on state-led data governance and does not fully explore the role of civil society, informal data systems, or the private sector. Future research should address these gaps. Future research should examine the Syrian diaspora's role in data governance; the potential of blockchain and other emerging technologies for data management; the gender dimensions of data inclusion; the relationship between data governance and transitional justice; and comparative data governance across Syria's governorates.

5.2. Recommendations

Based on the analysis, the following recommendations are offered for Syria's data governance transformation:

- **Prioritize the Completion and Interoperability of Core National Registries:** The completion and interoperability of the eight core government registries should be treated as the highest priority. Without reliable, interoperable data systems, effective service delivery and data-driven governance remain aspirational. The Ministry of Interior's commitment to digitizing all services by March 2026 should be supported and expanded.
- **Conduct a Comprehensive Population Census:** A comprehensive population census and regular national surveys are a top strategic priority. As Nahlawi notes, "a state cannot plan its future while it does not know its demographic and social reality." The census should use modern methodologies and reach all populations, including displaced persons and returnees.
- **Invest in Geospatial Data Infrastructure:** Building on the Syria ReMapping project and the Aleppo Damage Assessment Report, Syria should invest in a comprehensive geospatial data infrastructure. This includes establishing standards for geospatial data collection, storage, and sharing; training GIS professionals; and integrating geospatial data with other government data.
- **Strengthen the Legal and Regulatory Framework:** While Syria has established a legal and regulatory framework, including data protection and cybersecurity legislation, limited implementation capacity remains. Establish and resource a specialized authority to regulate data exchange. Enforcement mechanisms should be strengthened.
- **Build Institutional Capacity in Data Science and Analysis:** There is a "tangible gap between the technical capacity for storage and processing and the institutional capacity to produce reliable data and use it in decision-making". Syria should invest in training programs in data science, data analysis, GIS, and data management. Expand the Digital Innovation Center (DIGIT), and strengthen partnerships with universities and international institutions.

- **Develop a National Data Governance Framework:** Finalize and adopt the national data governance framework, as discussed in the February 2026 workshop. The framework should address data ownership, data sharing, data protection, and data quality. It should establish clear roles and responsibilities for data governance across government.
- **Launch an Open Data Initiative:** Making non-sovereign data available in open and organized formats "enables entrepreneurs, researchers, and developers to create new products and services, and supports evidence-based decision-making". Syria should launch an open data portal, starting with high-value datasets including reconstruction data, budget data, and service delivery data.
- **Leverage the Syrian Diaspora:** The Syrian diaspora represents a significant resource for data governance. Develop mechanisms to engage the diaspora in data collection, analysis, and innovation. The Syria ReMapping project, which engaged more than 100 Syrians in the diaspora, provides a model for this approach.
- **Strengthen Inter-Ministerial Coordination:** Data fragmentation across institutions requires strengthened inter-ministerial coordination mechanisms. The government data integration platform should be completed, and regular coordination meetings should be established.
- **Build Trust through Transparency and Accountability:** Building trust in data systems requires transparency, accountability, and clear legal protections. Expand citizen feedback platforms, including the "Wajib" complaints platform. Open data should enable citizens to monitor reconstruction progress and hold authorities accountable.

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