STRATEGIC COUNTRY REPORT: ALGERIA

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Contents

Chapter 1

Geopolitics

Executive Summary

Algeria's geopolitical trajectory regarding digital infrastructure is defined by a strategic pivot toward regional integration and a recalibration of its international partnerships. The nation is actively positioning itself as a critical digital gateway between the Mediterranean and the Sahel, leveraging its geography to bridge Europe with landlocked African nations such as Mali and Niger through the Trans-Saharan Optic Fibre Broadband Project [Source 2]. However, this ambition is juxtaposed against a domestic telecommunications sector characterized by strict state control, where Algérie Télécom maintains a monopoly over undersea data cable traffic [Source 8].

While Algeria seeks to modernize its connectivity, it faces significant legacy challenges, including a history of corruption involving major Chinese telecommunications firms, which has complicated its technological advancement [Source 1]. Consequently, Algiers appears to be diversifying its strategic alliances, recently strengthening ties with Italy through the "Mattei Plan" to enhance digital sovereignty and reduce reliance on singular external actors [Source 12]. The geopolitical landscape is thus marked by a tension between maintaining state-centric control over information flows and the necessity of foreign investment to establish Algeria as a continental digital hub.

1.1 Regional Integration and the Trans-Saharan Corridor

Algeria is aggressively pursuing a strategy to become the primary digital node for the Sahel region. The central pillar of this strategy is the Trans-Saharan Optic Fibre Broadband Project, designed to interconnect Algeria, Niger, Nigeria, and Chad. This infrastructure is explicitly intended to provide landlocked neighbors—specifically Mali and Niger—with alternative access to international connectivity, thereby reducing the digital divide and cementing Algeria's influence in the Maghreb-Sahel axis [Source 2].

This fiber optic backbone runs parallel to the Trans-Sahara Highway (TAH 2), creating a dual-use corridor for trade and data. The strategic implications extend beyond economics; the phys-

ical infrastructure, including sand berms along the Algeria-Niger border, suggests a security dimension aimed at disrupting illicit trafficking and enhancing border monitoring [Source 5]. Furthermore, the "Trans-Maghreb Corridor" initiative indicates an intent to deepen digital and physical integration with Tunisia, fostering a more cohesive North African economic bloc [Source 6]. Conversely, connectivity with Libya remains underdeveloped due to prevailing instability, highlighting the security constraints on Algeria's eastern flank [Source 5].

1.2 Strategic Partnerships and the European Pivot

Algeria's procurement and partnership strategies reflect a balancing act between traditional partners and new European overtures. Historically, the sector has been marred by governance issues; notably, Chinese telecommunications giants Huawei and ZTE faced a two-year ban from public tenders following bribery allegations totaling $10 million between 2003 and 2006. This history, combined with broader trade imbalances and a lack of technology transfer, has presented obstacles to the sector's maturation [Source 1].

In a significant geopolitical shift, Algeria is currently deepening cooperation with Italy. Under the framework of the "Mattei Plan for Africa," Algérie Télécom signed a Memorandum of Understanding (MoU) with the Italian service provider Sparkle. This agreement focuses on developing a new subsea cable linking Algeria to Italy, alongside collaboration on cloud computing and cybersecurity [Source 12]. This partnership is strategically framed to enhance Algeria's "digital sovereignty" by diversifying its international routes and reducing dependence on existing, potentially congested, or politically sensitive corridors [Source 13].

1.3 Infrastructure Control and Digital Sovereignty

The internal governance of Algeria's digital geography is characterized by rigid state dominance. Algérie Télécom holds a statutory monopoly over all undersea data cable traffic entering and exiting the country [Source 8]. This centralization allows the state to maintain tight control over the information environment, a posture reinforced by reports of internet restrictions and censorship [Source 22].

Despite this monopoly, Algeria relies on a diverse array of 14 distinct Tier-1 transit providers to connect to the global internet [IYP-GRAPH]. To bolster its Mediterranean connectivity, Algeria is participating in the Medusa Submarine Cable System, which will link the country to France, Spain, and Italy [Source 20]. While physical cable connections suggest an alignment with European and African digital blocs [Source 25], the state's monopoly acts as a buffer against direct foreign ownership of critical gateways, theoretically mitigating external leverage while simultaneously creating a single point of failure for the national network.

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Chapter 2

Infrastructure

Executive Summary

Algeria's national telecommunications infrastructure is currently undergoing a significant transitional phase, characterized by a dichotomy between aggressive fiber optic modernization in urban centers and persistent connectivity gaps in remote regions. As of early 2024, the nation has achieved a Fiber-to-the-Home (FTTH) household penetration rate of approximately 20.3%, with 1.5 million households connected [1]. The strategic focus has shifted toward preparing the network architecture for the commercial launch of 5G services, anticipated for the second half of 2025 [2].

However, the network faces critical resilience and coverage challenges. The government has identified significant "white spots" along major road arteries and in sparsely populated areas, necessitating a state-mandated universal service program to connect 1,400 remote locations to 4G networks [3]. While Algeria is positioning itself as a regional hub through the Trans-Saharan Optic Fibre Broadband Project [4], the domestic data hosting ecosystem remains opaque, with no definitive intelligence confirming the presence of major hyperscale data centers or a robust, publicly detailed Internet Exchange Point (IXP) architecture [5].

2.1 Mobile Network Architecture and 5G Readiness

Current Coverage and "White Spots" Despite high mobile penetration rates in urbanized coastal regions, Algeria's mobile network infrastructure exhibits significant geographical disparities. The government has officially acknowledged the existence of "white spots"—areas with critically low or non-existent mobile coverage—particularly in the southern Sahara region and along major transport arteries. In response to rising road accidents and the need for territorial continuity, the government has issued directives to mobile operators to ensure full coverage of road networks [3]. Concurrently, a universal service program is executing the connection of 1,400 sparsely populated zones to the 4G network to bridge the digital divide [3].

5G Deployment Timeline and Spectrum Algeria is lagging behind regional peers in 5G

deployment but has established a concrete timeline for adoption. Commercial 5G rollouts are scheduled for the second half of 2025, following the awarding of licenses to the three primary operators: Mobilis, Djezzy, and Ooredoo [2][6]. The initial deployment strategy involves a phased launch starting with eight pilot *wilayas* (provinces) before national expansion [6].

Infrastructure Modernization To support the anticipated surge in data traffic from 5G, operators are actively upgrading their Radio Access Networks (RAN). Ooredoo Algeria has partnered with Nokia to modernize its network, deploying 5G-ready base stations and massive MIMO Adaptive Antennas. This partnership aims to increase network performance and energy efficiency, with Nokia expected to manage nearly 50% of Ooredoo's network share [7].

2.2 Fixed Broadband and Fiber Optic Backbone

Fiber-to-the-Home (FTTH) Expansion The deployment of fiber optics is the cornerstone of Algeria's National Broadband Plan. As of March 31, 2024, the number of households connected to FTTH reached 1.5 million, representing a penetration rate of roughly 20.3% of the country's 7.4 million households [1]. Algérie Télécom has reported reaching a total of 2.5 million fiber optic subscribers, a figure that likely includes business and enterprise connections [8].

National and Regional Backbone Algeria is upgrading its core transport network to handle future capacity demands. Algérie Télécom has engaged NEC and Juniper Networks to roll out a modernized, nationwide IP metro commercial network. This infrastructure is designed to support high-capacity data traffic driven by 5G and FTTx expansion [9].

Regionally, Algeria is a key stakeholder in the Trans-Saharan Optic Fibre Broadband Project. This strategic initiative aims to establish a high-capacity terrestrial fiber corridor connecting Algeria to Nigeria, Chad, and Niger. The project is intended to reduce reliance on international submarine cables for intra-African traffic and foster digital inclusion in the remote Sahara region [4]. However, the deployment of fiber in these remote desert areas remains logistically complex and capital-intensive due to the difficult terrain and vast distances involved [10].

2.3 Data Infrastructure and Sovereignty

Data Centers and Cloud Capacity Intelligence regarding Algeria's domestic data center capabilities indicates a lack of major hyperscale facilities. There is no confirmed presence of global colocation giants such as Equinix or NTT DATA within the country [11][12]. Furthermore, major cloud service providers like Google do not list Algeria as a location for data centers or cloud regions [13]. This suggests that Algeria's data infrastructure is likely dominated by smaller, local facilities or state-owned enterprise data centers, potentially limiting the capacity for high-volume, low-latency cloud computing and AI applications compared to global standards.

Internet Exchange Points (IXPs) Information regarding the operational status, location, and peering capacity of Internet Exchange Points (IXPs) in Algeria is limited. While IXPs are recognized globally as critical for keeping local traffic domestic and reducing latency, there is

no definitive public registry detailing the topology of Algeria's IXP ecosystem [5]. This lack of visibility presents a challenge in assessing the resilience of domestic traffic routing and the nation's independence from international transit links.

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Chapter 3

Market

Executive Summary

The Algerian telecommunications market is characterized by a stable, high-concentration oligopoly dominated by the state-owned operator Mobilis, which holds a commanding market share of nearly 43% as of late 2024. The sector operates under a three-player structure involving Mobilis, Djezzy, and Ooredoo, with no immediate indicators of market consolidation or the entry of disruptive challengers. A defining feature of the current market landscape is the exceptionally low cost of mobile data; at approximately USD 0.51 per gigabyte, Algeria offers the most affordable mobile data rates in the North African region, significantly undercutting European averages. Despite this consumer price advantage, the sector's financial outlook remains conservative. Total telecommunications service revenue is projected to experience marginal growth, with a Compound Annual Growth Rate (CAGR) of just 0.5% through 2029, though the mobile data segment specifically is expected to outperform the broader market. Infrastructure development remains in a transitional phase, with median download speeds hovering around 31 Mbps and commercial 5G deployment anticipated by late 2025.

3.1 Competitive Landscape and Market Share

The Algerian mobile market exhibits a moderate to high level of concentration, effectively functioning as a three-operator oligopoly. As of the fourth quarter of 2024, the total number of mobile subscribers in the country reached 54,050,526. The market leader is the state-owned operator **Algérie Télécom Mobile (Mobilis)**, which has secured a dominant position with 42.74% of the subscriber base, equating to approximately 23.1 million users [Source 1].

The remaining market share is divided between two private entities. **Optimum Télécom Algérie (Djezzy)** holds the second position with 30.47% of the market (16.4 million subscribers), followed closely by **Wataniya Télécom Algérie (Ooredoo)**, which captures 26.79% (14.4 million subscribers) [Source 1]. Intelligence indicates no evidence of a "disruptor" operator entering the ecosystem to alter this balance, nor are there current indicators of imminent mergers

or acquisitions that would consolidate the market further [Source 6].

3.2 Pricing Dynamics and Affordability

Algeria maintains a distinct competitive advantage regarding consumer pricing for mobile data. The average price for 1GB of mobile data is recorded at USD 0.51, making it the most affordable market in the North African region [Source 2]. For comparison, the regional average for North Africa is USD 0.86, with Mauritania recording the highest costs at USD 1.32. Furthermore, Algerian data pricing is significantly lower than the Western European average of USD 2.08 [Source 2].

Consumer plans are predominantly volume-based (e.g., 1GB, 10GB caps) rather than speed-based [Source 8]. While pricing is favorable, specific intelligence regarding the Average Revenue Per User (ARPU) and the affordability of data plans across different income quintiles remains unavailable in current open-source reporting [Source 4].

3.3 Network Performance and Infrastructure

Network performance metrics indicate that Algeria is in a phase of incremental infrastructure improvement. The median mobile download speed is currently recorded at 31.22 Mbps, with a median upload speed of 12.37 Mbps [Source 9]. While specific latency figures are not definitively reported, the current speed metrics suggest a baseline capability for standard broadband applications, though high-bandwidth real-time applications may face limitations compared to global leaders.

The market is preparing for a technological shift with the anticipated rollout of 5G services. Commercial launch is expected by the end of 2025. In preparation, the market leader, Mobilis, has conducted trials achieving speeds of up to 1.2 Gbps, signaling a potential significant uplift in network capabilities in the medium term [Source 8].

3.4 Financial Outlook and Revenue Trajectory

The financial trajectory of the Algerian telecommunications sector is forecasted to be stable but slow-growing. The projected Compound Annual Growth Rate (CAGR) for total telecom service revenue is estimated at 0.5% for the period spanning 2024 to 2029 [Source 7].

Growth is expected to be asymmetrical across service segments. While the broader market shows stagnation, the mobile data segment is projected to expand at a CAGR of 4.8%, driven by increasing data consumption and smartphone penetration. Similarly, fixed broadband revenue is anticipated to grow at a CAGR of 3%, offsetting declines in legacy voice services [Source 7].

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Chapter 4

Localization

Executive Summary

Algeria has adopted a rigid and protectionist posture regarding data localization, driven primarily by national sovereignty concerns and a desire to cultivate a domestic digital ecosystem. The current strategic landscape is defined by the **2018 Data Protection Law** and the **2018 E-commerce Law**, which collectively mandate the hosting of sensitive citizen data and e-commerce platforms within national borders [Source 1][Source 2]. The government views data residency as a critical component of national security, evidenced by the active involvement of the Ministry of National Defense in cyberspace monitoring and the state's monopoly on undersea cable infrastructure via Algérie Télécom [Source 3][Source 4].

While the **National Strategy for Digital Transformation (SNTN-2030)** outlines ambitious goals for infrastructure development and regulatory modernization, implementation is hindered by bureaucratic friction and a restrictive business environment [Source 5][Source 6]. The mandatory use of the **.dz** country code Top-Level Domain (ccTLD) for e-commerce operators faces resistance due to administrative barriers and a persistent market preference for international domains [Source 7]. Furthermore, strict localization requirements have been identified by international trade bodies as non-tariff barriers that impose disproportionate costs on small firms and deter foreign cloud providers, potentially stalling the adoption of advanced cloud technologies necessary for rapid digital transformation [Source 4].

4.1 Legal Framework and Data Sovereignty

Algeria's regulatory environment is characterized by explicit mandates for data residency, prioritizing state control over the free flow of information. The cornerstone of this framework is **Law No. 18-07 (2018) on the Protection of Individuals in the Processing of Personal Data**. Specifically, Article 44 prohibits the transfer of personal data to foreign states if such transfer is deemed to harm public security or the vital interests of the nation [Source 1].

This protectionist stance is reinforced by sector-specific regulations: * **Cloud Computing:**

Decision No. 48/SP/PC/ARPT/17 (2017) explicitly mandates that operators of public cloud computing services must establish their infrastructure within Algerian territory and host data locally [Source 1]. * **E-Commerce:** Law No. 18-05 (2018) requires all local e-commerce operators to host their websites in Algeria and utilize the ".dz" domain name [Source 1][Source 4]. * **Sovereignty Oversight:** The regulatory framework is supported by the Ministry of National Defense, which maintains oversight of cyberspace. The government actively cautions foreign companies regarding technology approvals, reflecting a security-first approach to digital infrastructure [Source 3].

These laws collectively create a "strict protection and mandatory localization" regime. While intended to safeguard national interests, international assessments suggest these policies act as trade barriers, complicating operations for foreign digital service providers [Source 3][Source 4].

4.2 Cloud Infrastructure and Digital Independence

The Algerian government does not have a publicly defined policy explicitly favoring national cloud providers over international hyperscalers (e.g., AWS, Azure, Google Cloud); however, the regulatory environment effectively forces a preference for domestic infrastructure for regulated sectors. The requirement for public cloud operators to establish physical infrastructure in Algeria [Source 1] serves as a de facto localization policy, limiting the penetration of global hyperscalers that lack local data centers.

Infrastructure Strategy: Under the **SNTN-2030**, the government is pursuing the development of national data centers and robust ICT infrastructure to support digital sovereignty [Source 5]. This includes the establishment of the High Commission for Digitization and the National Higher School of Cybersecurity to build indigenous capacity [Source 6]. Despite these ambitions, the market remains constrained by the state-owned enterprise **Algérie Télécom**, which holds a monopoly on undersea data cable traffic, thereby controlling the critical gateway for all international data flows [Source 4].

Market Dynamics: There is no definitive data on the market share split between local and international hosting providers [Source 8]. However, the U.S. Trade Representative notes that localization requirements impose "unnecessary costs" and are "disproportionately burdensome" for small firms, suggesting that the local infrastructure market may not yet be competitive or cost-efficient enough to support broad digital adoption without regulatory coercion [Source 4].

4.3 National Domain (.dz) and Internet Governance

The adoption of the national ccTLD, **.dz**, is legally mandated for specific sectors but faces significant practical hurdles in broader adoption.

- **Mandatory Usage:** As per Law No. 18-05, e-commerce merchants are legally required to use the .dz domain to operate within the country [Source 1].

- **Adoption Barriers:** The registration process is described as restrictive and bureaucratic. Unlike generic top-level domains (gTLDs) like .com, .dz domains cannot be registered by individuals; they are reserved for entities with a registered trademark or company name. The process can take approximately three weeks, and the registry (NIC.DZ) does not support Internationalized Domain Names (IDNs), limiting accessibility for non-Latin script users [Source 7].
- **Market Preference:** Due to these friction points, there remains a strong preference among non-regulated Algerian entities for .com domains, which are perceived as having greater global recognition and ease of acquisition [Source 7].

4.4 Strategic Risks and Implementation Challenges

Algeria's localization strategy faces a "digital colonialization" risk paradox. While attempting to avoid reliance on foreign tech giants—a concern shared by many African nations regarding the concentration of market power in US and Chinese platforms [Source 9]—Algeria's isolationist policies may stifle the local innovation needed to achieve true digital independence.

Key Challenges: * **E-Government Maturity:** Algeria ranks 116th globally on the UN E-Government Development Index (EGDI) with a score of 0.5956. While this is above the African average, it lags behind the global average, indicating that the current infrastructure and human capital (HCI) are not yet fully optimizing digital public service delivery [Source 10]. * **Economic Impact:** The prohibition of using online payment processors for international transfers and the requirement for local hosting create a difficult environment for digital startups. The lack of a complete regulatory framework for the digital economy, combined with slow adaptation to international trends, hampers the growth of a competitive local cloud market [Source 3]. * **Infrastructure Gaps:** Despite high teledensity, internet infrastructure is concentrated in urban areas, and the "last mile" connectivity required for a robust digital economy faces reliability issues [Source 7].

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Chapter 5

Security

Executive Summary

Algeria's national cybersecurity posture is characterized by a critical deficit in routing security standards and a high reliance on external digital infrastructure. Intelligence indicates a 0.0% coverage rate for Resource Public Key Infrastructure (RPKI) Route Origin Authorizations (ROAs) across Algerian IP prefixes, leaving the national network architecture theoretically vulnerable to route leaks and spoofing `[Internal Graph]`. Despite this lack of preventative protocols, no Border Gateway Protocol (BGP) hijacking incidents originating from or targeting Algerian Autonomous System Numbers (ASNs) were detected in the past 24 months `[Internal Graph]`.

The nation's digital topology exhibits significant centralization. `CLOUDFLARENET` has been identified as a critical external chokepoint, with 956 Algerian ASNs dependent on its infrastructure, vastly outnumbering domestic dependencies such as `ALGTEL-AS [Internal Graph]`. International assessments classify Algeria as a high-risk environment; specific reports rank the country fourth globally for cybersecurity risk, citing a cyber safety score of only 43.19 `[Source 12]`. Significant intelligence gaps remain regarding granular DDoS attack volumes and specific malware prevalence within the country.

5.1 Network Infrastructure and Routing Security

Routing Protocols and Vulnerabilities The adoption of modern routing security standards within Algeria is virtually non-existent. Current technical surveillance reveals that 0.0% of Algerian IP prefixes are covered by RPKI ROAs `[Internal Graph]`. Furthermore, there is no evidence of Algerian ASNs actively participating in the Mutually Agreed Norms for Routing Security (MANRS) initiative, a global baseline for routing hygiene `[Source 2]`. Despite the absence of these protective frameworks, the routing environment has remained operationally stable; no BGP hijacking incidents involving Algerian networks were recorded over the last two years `[Internal Graph]`.

Critical Chokepoints and Dependencies Analysis of the Algerian internet topology high-

lights a heavy reliance on foreign content delivery networks and domestic telecommunications incumbents. CLOUDFLARENET serves as the primary critical chokepoint for routing announcements, with 956 incoming dependencies from other networks [Internal Graph]. Domestically, ALGTEL-AS (Algérie Télécom) is the most significant upstream provider, supporting 17 incoming dependencies, followed by wataniya-telecom-as with 5 [Internal Graph]. This concentration of dependencies creates potential single points of failure for national connectivity.

5.2 Cyber Threat Landscape

Risk Assessment and Resilience Algeria faces a challenging cyber threat environment. External assessments place the nation in a high-risk category, with one report assigning a cyber resilience score of 67.72 but a significantly lower cyber safety score of 43.19 [Source 12]. Other indices suggest a score below 52, indicative of growing exposure to cyber threats without commensurate defensive maturity [Source 10].

Threat Vectors and Intelligence Gaps There is a notable lack of specific, granular data regarding the volume of Distributed Denial of Service (DDoS) attacks targeting Algerian infrastructure specifically. While global trends indicate a surge in botnet-driven attacks and DNS-layer assaults—with global attack bandwidths reaching 3.12 Tbps—local statistics for Algeria are unavailable [Source 3, Source 4]. Similarly, no public intelligence reports currently detail the prevalence of specific malware families or ransomware strains within the country [Source 14].

Protocol Security Data regarding the implementation of Domain Name System Security Extensions (DNSSEC) is opaque. Technical validation rates for Algeria are not available in current datasets, and the adoption rate among the top 10 Algerian ASNs remains unquantified [Source 6, Internal Graph].

5.3 Governance and Strategic Framework

Algeria's cybersecurity maturity is evaluated under the International Telecommunication Union (ITU) Global Cybersecurity Index (GCI). While a specific 2024 ranking is not explicitly detailed in the provided intelligence, the country's score is influenced by its performance across five pillars: legal measures, technical implementation, organizational structures, capacity development, and cooperation [Source 8]. The identified lack of technical implementation (e.g., 0% RPKI) likely negatively impacts the "Technical Measures" pillar of this assessment.

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Chapter 6

Governance

Executive Summary

Algeria's governance of the digital domain is characterized by a dichotomy between the establishment of formal legal frameworks for data protection and cybercrime, and the practical application of restrictive measures that prioritize state security over digital rights. While the nation has enacted Law 18-07 to govern personal data protection and has signed the United Nations Convention on Cybercrime, it remains outside key international frameworks such as the Budapest Convention and the Malabo Convention [Source 1][Source 3][Source 7].

The state retains significant control over the information environment through a combination of legislative instruments and executive actions. Recent amendments to the Penal Code and the enforcement of the 2009 Cybercrime Law provide broad authorities for surveillance and the criminalization of online speech deemed harmful to national unity [Source 9][Source 12]. Furthermore, the governance of telecommunications infrastructure is marked by a lack of transparency in licensing and the periodic implementation of internet shutdowns, particularly during national examination periods, which contravenes principles of net neutrality and disrupts digital continuity [Source 15][Source 18]. Civil society organizations advocating for digital rights operate under a restrictive legal environment that hampers their ability to challenge these governance mechanisms effectively [Source 19].

6.1 International Legal Framework and Cybercrime Legislation

Algeria's integration into the global digital governance architecture is selective. The country has not ratified the Budapest Convention on Cybercrime, a decision identified as a significant obstacle to international cooperation and alignment with established global norms [Source 1]. Conversely, Algeria has signed the United Nations Convention on Cybercrime, signaling an intent to engage in international cooperation for collecting electronic evidence and combating offenses such as online fraud and the distribution of child sexual abuse material [Source 3]. Additionally, Algeria has not ratified the African Union Convention on Cyber Security and Personal Data

Protection (Malabo Convention), meaning it is not legally bound by the AU's mandates to establish specific cybersecurity strategies or independent oversight bodies as defined by that treaty [Source 8].

Domestically, cybercrime is governed by Law No. 09-04 (2009). While this law addresses various offenses, analysis indicates legislative gaps regarding computer forgery and device abuse. Furthermore, the current framework grants the state potentially disproportionate powers regarding the interception of correspondence and electronic surveillance, often lacking the robust safeguards found in international standards [Source 1].

6.2 Data Protection and Privacy Governance

The governance of personal data is codified under Law No. 18-07 (2018), which establishes the rights of individuals regarding the processing of their data and mandates the creation of the National Authority for the Protection of Personal Data (ANPDP) [Source 6]. The ANPDP holds the authority to conduct investigations, issue fines up to 1,000,000 DZD (approx. $7,500 USD), and suspend unlawful processing activities [Source 16]. Organizations are required to register and obtain authorization prior to processing data, with stricter requirements for sensitive information and cross-border transfers [Source 17].

Despite this legal structure, enforcement remains inconsistent due to financial and institutional challenges. Algeria has not received an adequacy decision from the European Union, indicating that its data protection framework does not yet meet the stringent standards of the GDPR [Source 6]. Divergences exist regarding transparency principles and the scope of authority concerning consent, suggesting that while the legal apparatus exists, its protective capacity in practice is still developing [Source 6].

6.3 Surveillance, Censorship, and Internet Control

The Algerian state maintains a robust surveillance apparatus supported by legal mechanisms that prioritize national security. Laws No. 18-04 and No. 09-04 require telecommunications providers to assist in IT proceedings and allow for the interception of communications [Source 12]. However, these powers are exercised with limited transparency; the Ministry of National Defense's cybercrime unit coordinates these efforts without public details regarding the limits of their authority or protections for subjects of surveillance [Source 14].

Freedom of expression online is significantly constrained by the Penal Code, specifically following amendments in May 2024. These provisions criminalize the criticism of officials and the sharing of "confidential" information or "false news" that harms national unity, carrying prison sentences of two to five years [Source 9][Source 20]. This legal environment has facilitated the prosecution of social media users, whistleblowers, and journalists, fostering a climate of self-censorship [Source 9].

Regarding network management, the government has demonstrated a willingness to implement

total internet shutdowns. While there is no specific legal provision explicitly granting the authority for such shutdowns, the state has ordered nationwide blackouts during high school exams to prevent cheating [Source 18]. This practice indicates a de facto rejection of net neutrality principles in favor of immediate administrative control [Source 18].

6.4 Telecommunications Regulation and Civil Society

The telecommunications sector is regulated by the Autorité de Régulation de la Poste et des Télécommunications (ARPCE), which oversees compliance and equipment standards [Source 15]. The sector is described as highly regulated, with a market dominated by the state-owned Algérie Télécom. Information regarding the specific legal requirements and processes for obtaining operating licenses is opaque, and there is insufficient evidence to confirm the existence of a transparent, non-discriminatory licensing regime [Source 15].

Civil society organizations (CSOs) and Non-Governmental Organizations (NGOs) attempting to advocate for digital rights face a hostile governance landscape. The Associations Law No. 12-06 imposes stringent registration requirements and restricts foreign funding, while the government retains the power to dissolve associations deemed contrary to public order [Source 19][Source 20]. These restrictions, combined with the threat of arrest for digital activism, severely limit the ability of NGOs to monitor government overreach or advocate for policy reform in the digital sector [Source 19].

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Chapter 7

Strategic Synthesis & Roadmap

Chapter 8

Section 7: Strategic Synthesis & Roadmap

To: The President of the People's Democratic Republic of Algeria **From:** Office of the Chief Strategy Officer **Date:** October 26, 2025 **Subject:** The "Digital Fortress" Paradox – Transitioning from Defense to Dominance

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8.1 1. Executive Summary: The "Big Picture" Diagnosis

The Narrative: Mr. President, Algeria stands at a defining geopolitical intersection. We possess the physical assets—fiber backbones, energy resources, and geographic positioning—to become the undisputed **Digital Gateway of Africa**, bridging Europe to the Sahel. Our partnership with Italy via the "Mattei Plan" and the Trans-Saharan fiber project are the correct physical moves.

The Paradox: However, our strategy suffers from a critical contradiction: **The "Sovereign Fortress" Paradox.** We have built a physical fortress (state monopoly on cables, strict data localization) to protect our sovereignty. Yet, our digital gates are unlocked. Our national network has **0.0% routing security (RPKI) coverage**, leaving us vulnerable to hijacking, while our reliance on a single foreign entity (Cloudflare) for traffic filtering creates a hidden dependency that undermines the very sovereignty we seek to protect. We are locking the front door (legal barriers) while leaving the back windows wide open (technical insecurity).

To lead the region, we must shift from a posture of *restriction* to one of *secure integration.*

8.2 2. SWOT Analysis: The Strategic Cheat Sheet

8.2.1 Strengths (Internal Assets)

- **Geographic Primacy:** The shortest latency path between Europe and the emerging markets of the Sahel (Mali, Niger).
- **Energy Advantage:** Low industrial electricity costs make Algeria an ideal host for energy-intensive Data Centers (AI/Cloud).
- **Fiber Backbone:** 20% FTTH penetration and the Trans-Saharan backbone provide a solid physical skeleton for growth.

8.2.2 Weaknesses (Internal Flaws)

- **The "Zero-Trust" Void: 0% RPKI adoption** is a critical national security failure. Our routing architecture is defenseless against spoofing.
- **The Monopoly Bottleneck:** Algérie Télécom's absolute control over subsea cables creates a single point of failure and high costs, deterring hyperscalers (Google, AWS).
- **Policy Friction:** Exam-based internet shutdowns and strict localization laws signal "instability" to foreign investors.

8.2.3 Opportunities (External Trends)

- **The "Mattei Plan" Pivot:** Leveraging Italian partnership to bypass French legacy influence and modernize infrastructure.
- **Nearshoring 2.0:** Positioning Algeria not just for call centers, but as a "Data Processing Zone" for the EU, utilizing our cheap energy.
- **Sahelian Dependency:** Cementing political influence in Niger and Mali by controlling their digital lifeline to the world.

8.2.4 Threats (External Dangers)

- **Digital Encirclement:** Morocco and Egypt are aggressively liberalizing cable landings. If we do not open up, the data cables—and the economy—will bypass us.
- **Cyber Sovereignty Loss:** Over-reliance on foreign CDNs (Cloudflare) means a US-based company technically controls the availability of 900+ Algerian networks.
- **Brain Drain:** Restrictive digital environments drive our best cyber-talent to Europe or the Gulf.

8.3 3. Strategic Roadmap: The Policy Agenda

8.3.1 Phase 1: Immediate Hygiene & Security (Months 1-6)

- **Objective:** Secure the perimeter and signal stability.

- **Action 1 (Executive Decree):** Mandate **RPKI/ROA adoption** for all state-owned operators (Algérie Télécom, Mobilis) and the banking sector within 90 days. We cannot claim sovereignty if we cannot authenticate our own internet routes.
- **Action 2 (Policy Shift):** Formally end the practice of **Internet Shutdowns during exams**. Replace this with localized signal jamming in exam centers. Nationwide blackouts cost the economy millions and destroy our reliability rating.
- **Action 3 (Audit):** Commission a classified audit of the "Cloudflare Dependency." We need a sovereign, state-hosted caching layer to reduce reliance on US-based infrastructure.

8.3.2 Phase 2: Structural Reform & Infrastructure (Months 6-24)

- **Objective:** Unlock the market and attract capital.
- **Action 1 (Liberalization):** End the Algérie Télécom monopoly on **Subsea Cable Landings**. Allow the "Medusa" consortium and future partners to land cables directly. This will lower latency and prices, making us competitive with Marseille.
- **Action 2 (Data Center Zones):** Establish "Free Digital Zones" in the north (near power plants) where foreign data laws apply *only* to transit data, exempting them from strict localization to attract Hyperscalers (Microsoft/Google).
- **Action 3 (5G Rollout):** Accelerate the commercial 5G launch (H2 2025) with a strict requirement for **Industrial IoT** applications to support the oil & gas sector, rather than just consumer streaming.

8.3.3 Phase 3: The Vision – "The Digital Battery of Europe" (Years 2-5)

- **Objective:** Regional Hegemony.
- **Action 1 (Exporting Compute):** Position Algeria as the "Green Cloud" capital. We export gas to Europe; next, we export *processed data* (AI training models) powered by our cheap energy, keeping the high-value work within our borders.
- **Action 2 (Sahel Integration):** Offer subsidized bandwidth to Niger and Mali via the Trans-Saharan fiber, contingent on them using Algerian security protocols. This extends our cyber-defense perimeter deep into Africa.
- **Action 3 (Human Capital):** Transform the National Higher School of Cybersecurity into a regional center of excellence, training the cyber-defense forces of our African allies.

8.4 4. Final Verdict

Investability Score: MEDIUM *Explanation:* The physical assets (fiber/energy) are world-class, and the market is hungry (cheap data). However, the "investability" is capped by the state monopoly and regulatory unpredictability. If Phase 1 (Security/Policy) is executed, this score moves to **HIGH** within 12 months.

Maturity Score: DEVELOPING (High Latency) *Explanation:* We are a "Ferrari engine in a go-kart." We have high fiber penetration and 5G readiness, but our soft infrastructure (routing security, legal frameworks, cloud ecosystem) is dangerously immature. We are digitally connected but operationally fragile.

Mr. President, the fiber is laid. The strategy now requires the political will to unlock it.