

MVP: "Sign2Text 5G System" — Gesture-to-Text Communication Device

Product Description

A portable, standalone system for real-time translation of Algerian Sign Language (LSA) into text and voice, designed to serve **TWO PRIMARY MARKETS**:

Market 1: Individual Deaf Users (B2C)

- Personal communication device for daily life
- Portable unit for shopping, banking, transportation, social interactions
- Empowers independence and autonomy

Market 2: Institutions & Enterprises (B2B)

- Educational institutions (schools, universities)
- Healthcare facilities (hospitals, clinics)
- Corporate offices and recruitment agencies
- Government and public service centers
- Banks, retail stores, and customer service locations

System Components:

1. **Camera module** to capture gestures
2. **Processing unit** with AI for gesture recognition
3. **Output module**: screen for text, speaker for voice
4. **Form factors**:
 - Portable handheld device (for individual users)
 - Tablet interface (for personal/professional use)
 - Kiosk/stationary unit (for institutions)

Core Features

1. **LSA Gesture Recognition**
 - High-precision AI detects gestures and converts them into text/voice
2. **Real-Time Translation & Subtitles**
 - Text output on built-in display for two-way communication

3. Voice Output

- Converts recognized gestures into synthesized speech

4. Offline Mode

- Basic translation works locally without internet (essential for personal users)

5. 5G Connectivity (Optional / Advanced)

- Cloud processing for complex AI models and continuous improvements
- Low-latency streaming for institutional use
- Remote updates and multi-device synchronization

6. Export & Recording

- Conversations can be stored or exported for later review
 - Useful for medical records, educational documentation, or legal purposes
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Business Model

Dual Market Strategy

B2C Market: Individual Deaf Users

- **End-users:** ~220,000 deaf/hard-of-hearing individuals in Algeria
- **Product offerings:**
 - Affordable personal devices (subsidized or installment plans)
 - Monthly subscription for cloud features and AI updates
 - Freemium model: basic offline features free, premium 5G features paid
- **Distribution channels:**
 - Direct online sales
 - Partnerships with disability associations
 - Mobile operator partnerships (Djezzy, Ooredoo, Mobilis)
 - Retail presence in electronics stores

B2B Market: Institutional Clients

- **Target clients:**
 - Schools and universities
 - Hospitals and healthcare facilities
 - Corporations and HR departments
 - Banks and financial institutions
 - Government offices and public services
 - Retail stores and customer service centers
 - NGOs supporting disability inclusion
- **Product offerings:**
 - Enterprise-grade stationary units or multiple portable devices
 - Site licenses for multi-device deployments

- Annual maintenance and support contracts
- Cloud-based AI processing subscriptions
- Custom integration with existing systems

Entrepreneurship Type

Social Enterprise Model (Hybrid approach):

- **Social mission:** Subsidized units for individual users through partnerships with NGOs and government programs
 - **Commercial sustainability:** Full-price B2B sales fund subsidized B2C units
 - **Revenue streams:**
 1. Direct device sales (B2C and B2B)
 2. Leasing/rental to institutions
 3. Subscription services (cloud AI, updates, support)
 4. Maintenance contracts
 5. Installation and training services for enterprises
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Expanded Market Size & Opportunity

Total Addressable Market (TAM) - Algeria

B2C Market (Individual Users)

- **Deaf population:** ~220,000 LSA users
- **People with communication disabilities:** ~640,000 (32% of 2 million people with disabilities)
- **Family members & support network:** ~880,000 (4 people per deaf individual)
- **Potential market:** 1.1+ million people directly or indirectly affected

B2B Market (Institutional)

- **Educational institutions:**
 - ~27,000 schools (primary & secondary)
 - ~106 universities and higher education institutions
 - Target: 5-10% adoption = 2,700-5,000 institutions
- **Healthcare facilities:**
 - ~14,000 public health facilities
 - Hundreds of private clinics and hospitals
 - Target: 10% adoption = 1,400+ facilities
- **Corporate & Government:**
 - ~1.2 million registered companies
 - Target: Large companies (1000+ employees) = ~5,000 potential clients

- Government offices: ~1,500 administrative centers
- **Banks & Financial Services:**
 - ~20 major banks with ~1,500 branches nationwide
 - High-traffic locations requiring accessibility
- **Retail & Customer Service:**
 - Major shopping centers, airports, transportation hubs
 - ~500+ high-priority locations

Total Institutional Market: 10,000-15,000 potential B2B clients

Market Context

- People with disabilities: ~2 million (~32% with communication issues)
 - Mobile penetration: 116% subscription rate
 - Internet users: 79% of population → strong infrastructure for 5G-enabled system
 - **Few or no local competitors** providing LSA-specific gesture-to-text systems
 - **Growing awareness** of disability inclusion and accessibility requirements
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5G Opportunities

- **Real-time AI processing:** Offload heavy recognition tasks to cloud
 - **Multi-device deployment:** Synchronize systems across large facilities
 - **Low latency:** Critical for smooth, real-time communication
 - **Remote updates:** Continuous AI model improvements
 - **Data analytics:** Aggregate usage patterns to improve accuracy (privacy-protected)
 - **Scalability:** Add new users and locations without hardware upgrades
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Why Clients Will Pay

Individual Users (B2C)

1. **Independence:** Communicate without relying on interpreters or family
2. **Employment:** Improve job prospects and workplace communication
3. **Daily convenience:** Banking, shopping, healthcare access
4. **Social inclusion:** Participate fully in community activities
5. **Affordable:** Subscription model or subsidized pricing makes it accessible

Institutions (B2B)

1. **Legal compliance:** Meet accessibility and inclusion regulations
2. **Better service:** Improve communication with deaf clients/patients/students

3. **Cost savings:** Reduce dependence on expensive human interpreters
 4. **Reputation:** Demonstrate social responsibility and inclusivity
 5. **Efficiency:** Faster, more accurate communication in critical situations
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Revenue Streams

B2C Revenue

- Device sales (one-time purchase or installment)
- Monthly/annual subscriptions (\$5-15/month for cloud features)
- Accessories and add-ons

B2B Revenue

- Enterprise device sales (\$1,000-3,000 per unit)
- Multi-device packages and site licenses
- Leasing/rental programs (\$100-300/month per device)
- Annual maintenance contracts (15-20% of device cost)
- Cloud processing subscriptions (\$50-200/month per location)
- Installation and training services
- Custom integration fees

Projected Market Capture (5 Years)

- **B2C:** 10,000-20,000 individual users (5-10% of deaf population)
 - **B2B:** 1,000-2,000 institutional clients (10-15% of target market)
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Value Proposition

For Individual Deaf Users

"Finally, I can communicate independently in any situation—at the bank, at the doctor, when shopping—without waiting for an interpreter or burdening my family."

For Institutions

"For schools, hospitals, companies, and public institutions in Algeria who struggle with communication barriers between deaf/hard-of-hearing individuals and hearing staff, our Sign2Text 5G System uses AI + 5G connectivity to deliver real-time, accurate translation of Algerian Sign Language (LSA) into text and voice. Unlike human interpreters, basic apps, or foreign systems that do not support LSA, we provide a scalable, cost-effective solution optimized for the Algerian context, offering instant translation, cloud-powered AI, and accessibility at scale."

Competitive Advantage

1. **First-mover advantage:** No existing LSA-specific solutions in Algeria
2. **Dual market approach:** Broader revenue base and social impact
3. **Local adaptation:** Optimized for Algerian Sign Language and cultural context
4. **5G infrastructure:** Leverages Algeria's growing telecom capabilities
5. **Scalable technology:** Serves both individual and institutional needs with same core platform
6. **Social impact + commercial viability:** Sustainable business model that creates real change