

The FutureList

Intron Health

Innovation Memo

Innovation In Words








A note from the Founder and CEO of Intron Health, Tobi Olatunji, MD:

Since most humans talk 3x faster than they write and African clinicians talk 5x faster than they type on the keyboard, the app delivers practical productivity gains. One notable case study involved West Africa's largest Hospital, where our speech-to-text technology deployed in the Radiology Department reduced reporting turnaround time from over 48 hours to 20 minutes, demonstrating practical operational gain with far-reaching impact on patient and provider experience.

Intron Health

Executive Summary

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Health
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Electronic Medical Record (EMR)
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intron.io
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Seed
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2020

Intron Health is a healthtech startup founded by Tobi Olatunji and Olakunle Asekun. It is revolutionising healthcare documentation in Africa with its cutting-edge speech-to-text technology tailored for nearly 300 African accents. Intron Health recognises the challenges healthcare professionals face in digitising patient records, particularly in environments where doctors see a high volume of patients daily. Intron Health has developed a proprietary speech recognition platform integrated into its Electronic Medical Record (EMR) system. The innovative solution streamlines the cumbersome manual data entry process and addresses the specific linguistic nuances in diverse African accents, ensuring accurate and efficient transcription of medical notes.

Intron Health faces potential challenges and risks in its journey, including data security concerns and regulatory compliance, as it grows its user base and expands into different markets. Also, competition from established players and new entrants in the healthcare technology market.

However, Intron Health is addressing these challenges by implementing change management strategies, stringent security measures, differentiation through localisation, and investments in scalability solutions. Intron Health's speech-to-text technology has already been deployed in numerous hospitals across Kenya, Nigeria, South Africa, and Ghana. The startup focuses on empowering clinicians and healthcare institutions. Its success lies in its technological innovation and understanding of healthcare providers' unique challenges in Africa. Intron Health aims to accelerate the adoption of digitised healthcare by providing a seamless and user-friendly solution, contributing to improved patient care and operational efficiency in medical facilities across the continent.



Tobi Olatunji, MD
Founder and CEO

Tobi is a physician who transitioned from clinical practice to focus on building applications to transform healthcare through thoughtful, context-driven engineering. Tobi has worked as a machine learning scientist at companies like Amazon Web Services and Enlitic, developing algorithms for clinical natural language processing tasks.



Olakunle Asekun
Co-founder and COO

Olakunle is an experienced finance and accounting professional with an MBA from IE Business School. He is the Chief Operating Officer of Intron Health, intending to digitize 10,000 hospitals in Africa by 2025. In this role, Asekun is responsible for strategy, growth, fundraising, compliance, people management, and ensuring a fantastic customer experience.

Innovation Spotlight

Core Features

Intron Health offers transcription and EMR apps with core functionality, providing a clinical speech-recognition platform supporting over 200 African accents. The key features include:

- Real-time clinical speech-to-text for nearly 300 African accents. The transcription feature for medical notes allows doctors to dictate rather than type or write notes.
- Integration with Electronic Medical Record (EMR) systems to streamline clinical documentation.
- Offline deployment capability for continuous functionality even without an internet connection.
- Intron Health's Telecare enables virtual appointments through a secure platform. It facilitates text, voice, and video consultations, allowing patients to engage with their healthcare providers remotely.
- Furthermore, the Telecare feature streamlines the payment process by supporting electronic transactions, allowing patients to settle their bills online, before or after consultations conveniently.

Design and User Experience

- Intron Health's Transcribe App is a user-friendly tool tailored for simplicity, which is ideal for users with minimal tech literacy. It seamlessly integrates into Electronic Medical Records (EMRs) with just two buttons, enabling users to record, transcribe, and manage patient data effortlessly.
- The platform effectively addresses communication challenges by supporting nearly 300 African accents. Its design prioritises user efficiency, minimising clicks and streamlining workflows for tasks like investigations and clinical notes.
- Intron Health's EMR app's rapid orders feature saves over 90% of the time needed to process orders, significantly enhancing healthcare professionals' productivity. Intuitive notifications keep users informed, reducing waiting times and improving the overall user experience.
- The software's ease of use is reflected in positive feedback from users who appreciate its understanding of diverse accents.

Performance Metrics

- Intron Health claims to achieve more than 92% accuracy in transcribing medical speech with nearly 300 African accents.
- They track metrics such as documentation time, turnaround time and patient wait time. The platform aims to save doctors three to four hours daily, emphasising improved clinical documentation efficiency and clinicians' productivity.

Integration and Compatibility

- Intron Health integrates with existing Electronic Medical Record (EMR) systems used by hospitals through a widget. Its user-friendly approach involves no new hardware or software installation, effortlessly working with existing devices.
- The platform's compatibility with EMRs suggests a commitment to working seamlessly within existing healthcare infrastructures.
- The EMR App emphasizes seamless integration with existing healthcare systems by offering versatile data export capabilities, supporting multiple formats, including HL-7/FHIR. It adheres to international standards like LOINC, ICD, and CPT, ensuring current disease classification with ICD-11. This enhances interoperability and fosters effective collaboration within the healthcare ecosystem.

Safety, Compliance, and Sustainability

- Intron Health's Transcribe and EMR Apps are designed with multiple layers of protection. Intron Health implements robust encryption protocols to safeguard data in transit and at rest. The apps employ stringent role-based access control, ensuring only authorized users can access sensitive information.

- Also, they have implemented secure authentication methods and detailed audit trails to enhance accountability. Regular data backups are conducted to maintain data integrity, while compliance with regulations like HIPAA and GDPR ensures legal adherence and reinforces patient confidentiality and integrity within the applications.
- Intron Health gathers top-tier speech data from a wide range of countries, leveraging the input of over 11,000 contributors spanning 29 nations. Through the development of cutting-edge algorithms, Intron Health trains its models to excel in transcribing accents from minority populations.

Innovation in Business Model

- Intron Health deploys a subscription-based business model where hospitals or doctors purchase monthly credits per doctor.
- The model is innovative as it aligns with the usage patterns of healthcare professionals, allowing scalability based on the number of doctors using the platform.

Scalability of the Innovation

- The platform is designed to be scalable across different African hospitals with clients in Kenya, Nigeria, South Africa, and Ghana.
- The use of NVIDIA NeMo and cloud-based GPUs for training the speech-to-text models suggests a potential for scalability to handle increased demand and evolving technologies.
- Intron Health is researching to improve its AI model and operations. This ongoing study across four nations indicates an interest in continuously improving and adapting the technology to different environments.

Market Impact & Future Outlook

Intron Health has made significant strides in the African market, with a presence in Nigeria, Kenya, South Africa, and Ghana. The platform's support for nearly 300 African accents positions it uniquely in the region. Intron Health has onboarded notable institutions in its client portfolio, including University College Hospital in Ibadan, Federal Medical Centre in Ebute Metta, and Korle Bu Teaching Hospital in Accra, among others successfully. This indicates a growing acceptance of its solutions in diverse healthcare settings.

Intron Health has also gained attention from media outlets such as Techpoint, BBC News, and NVIDIA AI Blog. The positive coverage and spotlight indicate a rising interest in its innovative approach to healthcare technology. Additionally, Intron Health secured over \$1.5M in funding reflecting investor confidence in its mission and potential. Financial backing is crucial for scaling operations and further product development.

Furthermore, Intron Health's collaboration with NVIDIA, a significant player in the AI industry, suggests strategic alliances that could enhance the company's technological capabilities and market reach. Intron Health aims to reach 100 hospitals across Nigeria, Kenya, South Africa, and Ghana within 6-12 months. A successful expansion could establish the company as a key player in digitising healthcare records in these regions. If Intron Health's solutions effectively address the issue of clinician burnout and enhance productivity as intended, it could set a standard for healthcare technology in resource-constrained environments globally.

Also, Intron Health is exploring integration with major Electronic Medical Record (EMR) systems to expand its reach and seamlessly collaborate with existing healthcare infrastructure. Recognising the importance of offline functionality, Intron Health is enhancing its solutions to ensure accessibility even in areas with limited internet connectivity. Additionally, Intron Health might explore collaborations beyond the healthcare sector, leveraging its expertise in speech recognition for applications in other industries, such as customer service or education.

Societal & Environmental Impact

In regions like Africa, where there is a shortage of healthcare professionals, Intron Health's technology addresses the challenge of overburdened and burnt-out doctors handling many patients daily. By streamlining clinical documentation through speech-to-text, doctors can potentially see more patients, improving overall healthcare accessibility.

Also, by offering a solution specifically tailored to healthcare practitioners' needs, Intron Health contributes to making digitised healthcare more efficient. The platform's focus on reducing the time spent on paperwork allows doctors to allocate more time to patient care, potentially improving healthcare outcomes.

The move towards digital health records is about efficiency and sustainability. Intron Health's approach reduces reliance on paper-based documentation, contributing to environmental sustainability by decreasing the consumption of physical resources.

In addition, the platform's potential integration with Electronic Medical Records (EMR) and collaboration with NVIDIA for AI initiatives can contribute to advancements in medical research. These partnerships and research can support studies to improve healthcare practices and patient outcomes in Africa and beyond.

Furthermore, Intron Health's growth and expansion can lead to job creation, particularly in sales, support, and engineering areas. Additionally, the company's commitment to involving the community in improving speech-to-text technology through contributions could lead to skill development opportunities.

Potential Funding & Partnership Opportunities

Intron Health's innovative technology, focus on an underserved market, and potential for significant impact could make it an attractive investment or partnership opportunity for the right organizations. Potential Funding and partnership opportunities include:

- **Venture Capital Firms.** Given Intron Health's innovative technology and traction in the African market, the company could attract investment from venture capital firms focused on healthtech, AI, and emerging markets. Potential targets could be firms EchoVC, Partech Africa, Vilgro Africa, and Ventures Platform.
- **Impact Investors.** Intron Health's mission to improve healthcare accessibility and efficiency in Africa aligns with the goals of many impact investors. Organizations like Acumen, Novastar Ventures, Blue Haven Initiative, and Persistent Energy Capital could be interested in supporting the company's growth.
- **Accelerators and Incubators.** Intron Health could benefit from participating in accelerator programs focused on healthtech, AI, or emerging markets. Programs like Catalyst Fund, Caribou Digital, ALX Ventures and Founders Factory Africa could provide funding, mentorship, and access to a network of investors and partners.
- **Healthcare Providers and Hospitals.** Intron Health could explore partnerships with major healthcare providers and hospital networks in Africa to expand its reach and gain access to a broader customer base.
- **Technology Companies.** Intron Health's speech recognition and AI expertise could open up opportunities for partnerships with technology companies operating in adjacent spaces. Companies like Google Health, Sand Technologies (Startup Lab) and Electronic Medical Record (EMR) companies could be potential partners.

Potential Roadblocks & Risks

- **Possible resistance to change.** Healthcare professionals may adopt new technology due to factors such as familiarity or concerns about disrupting established workflows.
 - Intron Health can implement a change management strategy by clearly communicating the benefits of the new technology and providing training and support to address any concerns to ensure a smooth transition for new clients.
- **Data Security Concerns and Regulatory Compliance.** Intron Health may attract cyber threats as it grows and increases its user base. Also, expanding to new markets will require due diligence and adherence to the legal frameworks in those markets. Failure to comply with healthcare data protection and regulations can result in legal consequences and a loss of user trust.
 - Intron Health has implemented stringent security measures to safeguard patient data, including encryption, access controls, and regular security audits. We recommend regular reviews of security protocols and collaboration with local legal authorities to ensure compliance in new markets.
- **Competition from Established Players and other startups.** Established players in the healthcare technology market and new entrants may challenge Intron Health, especially in regions like Africa.
 - Intron Health has worked on differentiating its innovation by focusing on local accents, languages, and specific healthcare challenges prevalent in Africa. They should continuously innovate to stay ahead in technological advancements and offer solutions that meet evolving healthcare demands in the region.
- **Scalability Challenge.** As Intron Health's user base grows, the platform may face scalability and optimal performance challenges.
 - Intron Health should continuously invest in infrastructure upgrades, leverage cloud technologies for scalability, and closely monitor system performance to address scalability issues proactively.

Conclusion

Intron Health is working on a promising solution to the longstanding challenges of clinical documentation in Africa through its innovative speech-to-text technology. By tailoring its platform to support over 200 African accents and integrate seamlessly with existing electronic medical record systems, Intron Health addresses a crucial pain point for overworked healthcare professionals on the continent.

The startup's focus on user-centric design, robust security measures, and scalable architecture positions it well to drive the much-needed digitisation of healthcare documentation across Africa. With a growing clientele across Kenya, Nigeria, South Africa, and Ghana, Intron Health is well on digitising 10,000 hospitals by 2025 as vision states.

More than just a technological solution, Intron Health's impact has the potential to alleviate burnout among clinicians, improve healthcare accessibility for patients, and contribute to environmental sustainability by reducing reliance on paper records. As the startup innovates, forms strategic partnerships, and garners investor support, it could cement itself as a catalyst for transformative change in Africa's healthcare landscape.

Ultimately, Intron Health exemplifies how focused innovation can tackle long-standing systemic challenges uniquely, paving the way for a future where healthcare professionals can dedicate more time to providing quality patient care. The startup's journey is one to watch as it navigates the opportunities and hurdles ahead in its mission to revolutionise healthcare documentation in Africa and beyond.

Innovation In View

How Intron Health brings innovation to life

Transforming Healthcare Documentation with Accent-Inclusive Speech Recognition app

Intron Health's Transcribe App is designed to support over 200 African accents, addressing the unique linguistic diversity on the continent with an accuracy rate of 92%.



- The Transcribe App is designed to integrate seamlessly with hospitals' existing Electronic Medical Record (EMR) systems.
- By enabling real-time clinical speech transcription, the Transcribe App claims to provide a 7x productivity boost for clinicians.
- Offline functionality of the Transcribe app allows clinicians to continue documenting patient encounters even in areas with limited or no internet connectivity, a common challenge in many African regions.

Comprehensive and Integrated EMR Solutions in Africa

Intron Health's EMR app provides tools tailored to inpatient and outpatient nursing needs, ensuring that nurses have access to all the information and features required for delivering high-quality patient care.

- The EMR app features a pharmacy module, lab management module, and radiology integration that enables inventory management, report generation and tracking.
- Patients can conveniently book appointments online, make payments, and receive confirmations through the EMR app, streamlining the appointment scheduling process and reducing administrative burdens for healthcare providers.
- Intron Health's EMR app enables healthcare providers to connect with their patients virtually through video, voice, or chat.
- The EMR app includes a revenue dashboard that provides real-time tracking of revenue streams, data visualization, and trend analysis. This enables healthcare facilities to monitor their financial performance and make data-driven decisions.



Contributors

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The FutureList

Notes on our methodology

About The FutureList

The FutureList is dedicated to identifying and linking innovative technology companies with the investors, talent and strategic growth partners they need to rapidly scale their innovation. The FutureList leverages its network of local Innovation Scouts, a comprehensive online platform, and curated events to rapidly spot and match opportunities. The FutureList network has already profiled over 6,000 innovative companies, investors and partners globally.

We scout across a broad range of sectors in tech, aiming to identify the most innovative startups globally. This includes everything from AI to biotech, renewable energy, and more. The 10 categories we currently focus on are: Agriculture (farming, food, beverages, crops, forestry, aquaculture, livestock, irrigation, veterinary, etc.), Climate (electricity, energy, environment, renewables, recycling, circular economy, carbon credits, cleantech, etc.), Education (e-learning, school management, assessments, upskilling, tutors, languages, etc.), Enterprise (legal services, AI, cyber security, market research, recruitment, HR, customer success, consulting, SaaS tools, business analytics, etc.), Finance (banking, capital, trading, lending, personal finance, insurance, crypto, real estate, etc.), Health (medicine, biotech, medical equipment, pharmaceuticals, public health, digital health, hospitals, health records, wellness, fitness, beauty, etc.), Infrastructure (architecture, materials, computer networks, safety, law enforcement, construction, data centers, machinery, telecom, wireless internet, manufacturing, etc.), Media (marketing, influencers, animation, arts, gaming, fashion, content, platforms, music, publishing, translation, editing, etc.), Mobility (delivery, transportation, etc.), and Supply Chain (e-commerce, warehousing, logistics, retail, etc.)

About Our Innovation Scouts

Our Innovation Scouts are experienced professionals from diverse sectors with a keen eye for groundbreaking technologies and business models. They undergo rigorous training to ensure they provide maximum value to the startups they work with. They conduct their research on a volunteer basis. We have strict ethical guidelines in place. Any Scout with a potential conflict of interest is recused from the process to ensure fairness and objectivity.

About Our Innovation Memos

Innovation Memos provide a comprehensive profile of an innovator, whether its a startup, hub, investor or more established corporate, highlighting technological and business model innovations. The Memo is written in direct consultation with a verified representative from that entity, and also outlines suggestions around how to rapidly scale their innovation further through use of The FutureList's network. Once published, the Memo accessible to our network of investors, partners, and the general public for free on our platform. The Memo process is completely free for the companies featured as well. The entire process, from initial contact to publishing the Innovation Memo, typically takes about 4-6 weeks, but this can vary based on the startup's availability and responsiveness. Our goal is to promote and scale innovation globally. The FutureList platform and events are sponsored by partners.

Scaling Innovation

How **The FutureList** identifies and scales innovation globally



Ecosystem and sector mapping

Our Ecosystem team identifies the most innovative early-stage and growth-stage tech companies across key sectors in tech hubs around the globe.



Innovation memos and platform profiles

Our Research team interviews founders and tech executives to publish innovation memos and create a comprehensive company profile on our public online platform.



Introductions to strategic opportunities

Our Ecosystem team shares company profiles with relevant investors and strategic growth partners across our global ecosystem, and facilitate warm introductions where requested.



Private dinners and fireside chats

Our exclusive evening events bring together founders, tech executives and other special guests for networking and interactive discussions around technology and innovation.



Global summits & learning trips

Featured companies will be invited to larger annual events held at the regional and global stage that connect the most innovative companies with opportunities for further visibility.

Sponsor

The FutureList platform and events are sponsored by partners.



Sand Technologies, a global technology services company with presence across Silicon Valley, France, the UK, Romania, and several emerging markets, is at the forefront of supporting scale-ups worldwide in overcoming the challenges of rapid growth. We're currently aiding businesses in the United States, New Zealand, Denmark, the Netherlands, the UK, the UAE, South Africa, Kenya, and numerous other locations in developing scalable technology products, constructing world-class tech teams, enhancing revenue generation, and elevating customer satisfaction.

Learn more at www.sandtech.com

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