Executive Summary: Georgia – AISF (American Innovation & Sustainability Fund)

Overview

The **Georgia initiative** within the **AISF Master Plan** focuses on **transforming healthcare** via **AI-powered orthotics**, leveraging Georgia's world-class institutions—**Emory University** and **Georgia Tech**. By launching the **Gait & Walking Patterns in Disabled Children** case study and licensing **InvisaBrace®** and **InvisaSole®** to Emory, this project addresses critical mobility challenges in children (ages 1–5) and adults with cerebral palsy, diabetic foot conditions, and other mobility impairments. Over the next 15 years, the goal is to scale **AI-driven healthcare solutions** across Georgia and the nation, ultimately positioning the state as a **global leader** in **medical innovation**.

Key Objectives

- **Licensing & AI Orthotics Development**
  - **Invisa.ai™**: An AI platform for **personalized orthotic prescriptions** and remote monitoring.
  - **Licensing to Emory**: Emory University obtains rights to **InvisaBrace®** and **InvisaSole®** to conduct clinical trials, expand R&D, and establish commercial deployment.
  - **Clinical Impact**: Target children (1–5) and broader populations with **cerebral palsy**, **foot ulcers**, and other mobility issues.
- **Gait & Walking Patterns Case Study**
  - **Objective**: Compare **InvisaBrace®/InvisaSole®** vs. traditional AFOs, demonstrating **efficacy** and **commercial viability**.
  - **Approach**: Feasibility Pilot or Definitive Study at Emory, with potential private funding to bypass NIH hurdles.
  - **Outcome**: Data enabling **insurance reimbursement**, faster **market adoption**, and broad acceptance among **healthcare providers**.
- **Statewide & National Rollout**
  - **Phase 1**: Establish specialized labs at **Emory** for custom orthotic fitting, gather large-scale data for AI refinement.
  - **Phase 2**: Expand to other hospitals/clinics in Georgia and begin distributing solutions across multiple states.
  - **Phase 3**: Achieve commercial-scale production and insurance coverage by Year 3–5, then broaden to **10 states** and beyond.
- **Sustainability & RCP Integration**

- **RCP (Recycled Composite Polymers)**: Sourced from AISF's **Texas** initiative, providing eco-friendly materials for **lightweight, durable orthotics**.
- **Circular Economy**: Reduce waste and maintain **high-performance manufacturing** with sustainable polymers.

Phases & Long-Term Vision

Phase 1 (0–12 months)

- **Establish Partnerships**: Formalize licensing agreements with Emory; collaborate with Georgia Tech for prototype testing.
- **Initiate Case Study**: Launch **Feasibility Pilot** or **Definitive Study** for children aged 1–5, capturing gait analysis and outcomes.
- **Pilot Production**: Begin manufacturing using RCP materials, producing **InvisaBrace®** / **InvisaSole®** for clinical testing.

Phase 2 (12–24 months)

- **Clinical Lab Setup**: Open orthotic-fitting labs at Emory, refine products based on initial trial feedback.
- **Scaling Production**: Increase output capacity to meet demand in Georgia and neighboring states.
- **Telehealth Expansion**: Integrate **Invisa.ai™** for remote monitoring, optimizing cost efficiency and patient adherence.

Phase 3 (24–36+ months)

- **Multi-State Distribution**: Extend to **10 states**, forging partnerships with VA hospitals, children's clinics, and large healthcare systems.
- **Commercial Production & Insurance Coverage**: Reach **commercial-scale manufacturing** with robust **clinical data** supporting **insurance reimbursement**.
- **Revenue Generation**: By Year 3–5, achieve significant device sales and telehealth subscription revenue.

5-Year Outlook

- **Clinical & Commercial Success**

- **Broad Deployment**: Up to **1,000+ orthotic fittings** monthly across Georgia and select states.
- **Revenue Streams**: Orthotic device sales (InvisaBrace®, InvisaSole®) and telehealth subscriptions, targeting **$20–30M** in annual revenue by Year 5.
- **Job Creation**: **300–500 direct jobs** in manufacturing, clinical services, and AI R&D.
- **Insurance Adoption**: Due to strong clinical data, most private insurers and Medicare/Medicaid cover AI-driven orthotics.

➢ **Research Advancements**

- **Publication & Visibility**: Multiple peer-reviewed publications establishing **InvisaBrace®** as a **standard of care** for pediatric mobility.
- **National Reputation**: Emory is recognized as a leading orthotics research hub; Georgia Tech is lauded for **AI breakthroughs** in medical devices.

10-Year Outlook

➢ **National Orthotics Leader**

- **50-State Rollout**: Partnerships with major hospital systems and specialized clinics across the U.S.
- **Expanded Product Lines**: Additional **AI-driven orthotic solutions** for seniors, sports medicine, and post-surgical recovery.
- **Significant Market Share**: Potentially **25–30%** share of the U.S. orthotics market, with new innovations in gait analysis sensors and AI telehealth platforms.

➢ **Telehealth & Global Reach**

- **Global Export**: Collaboration with **international clinics**, deploying AI orthotics in Europe and Asia, generating additional revenue streams.
- **Advanced AI Models**: Real-time gait analysis with **machine learning** algorithms that adapt orthotic support based on daily movement patterns.

➢ **Economic & Healthcare Transformation**

- **1,500+ direct jobs** in Georgia spanning manufacturing, AI engineering, healthcare roles, and telehealth operations.
- **$100–150M** in annual revenues, fueling further R&D and expansions into other medical device domains.

15-Year Outlook

- **Global MedTech Powerhouse**

    - Georgia stands as a **world-leading center** for **AI orthotics research**, **manufacturing**, and **telehealth solutions**.
    - **Long-Term Partnerships**: Continual R&D collaborations with **Emory**, **Georgia Tech**, and **international** institutions.
- **Mass Personalization**
    - **Fully Automated** orthotic production lines offering **custom devices** within hours of gait data capture.
    - **Mass Adoption**: Millions of patients worldwide rely on **Invisa.ai™** to manage mobility challenges, significantly reducing **hospitalization** and **complication rates**.
- **Lifetime Value & ESG Impact**
    - **Tens of thousands** of total jobs created; billions of dollars contributed to Georgia's economy over 15 years.
    - **Environmental Stewardship**: Through continued use of **RCP materials**, Georgia remains at the forefront of **green manufacturing** in healthcare.

Case Study: Gait & Walking Patterns in Disabled Children

Cost & Funding Strategy

- **Feasibility Pilot** ($1–2M).
- **Private Funding** to bypass NIH complexities, accelerating commercialization.
- **Corporate Sponsorships** for motion capture and sensor equipment; potential philanthropic grants to offset Emory's overhead.

Clinical & Commercial Benefits

- **Accelerated Insurance Coverage**: Definitive data supporting AI-driven orthotics can drive quick **payer adoption**.
- **Peer-reviewed publications**: Gain **medical community acceptance** and **improve brand credibility**.
- **Wider Patient Access**: By proving efficacy and cost-savings vs. traditional AFOs, **Invisa.ai™** solutions scale rapidly.

Impact

- **Healthcare Accessibility**
  - **AI-driven orthotics** reduce the cost curve, extending advanced treatments to **underserved communities**.
  - **Children** with mobility challenges see immediate quality-of-life improvements, reinforcing Georgia's **reputation** as a healthcare innovator.
- **Job Creation & Workforce Development**
  - **Expanded manufacturing** for orthotics fosters 300–500 direct jobs by Year 5, possibly **1,500+** by Year 10–15.
  - Retraining programs for local workers ensure a **skilled medtech workforce** in **rural and urban areas**.
- **Sustainability**
  - Integration of **RCP materials** from the **AISF Texas initiative** promotes a **circular economy**, reducing waste and carbon footprint in the **medical device** supply chain.
- **Long-Term Economic Growth**
  - **$20–30M** in annual revenue by Year 5, reaching **$100M+** by Year 10, fueling reinvestment in **Georgia's** healthcare infrastructure and **R&D**.

Financial Projections

Phase 1 (0–12 months)

- **Initial Capital Investment**: ~$3–5M
  - **Licensing & R&D**: Securing rights for InvisaBrace®/InvisaSole®, pilot manufacturing, Emory case study.
  - **Pilot Production**: Limited run of AI-driven orthotics for **clinical validation** and initial trials.
  - **Case Study Funding**: Covers **Feasibility Pilot** or partial **Definitive Study** (~$300K–$2M).
- **Revenue**: Minimal in Year 1
  - **Focus** on clinical validation, prototype refinement, and brand building among healthcare providers.

Phase 2 (12–24 months)

- **Additional Capital Investment**: ~$5–7M

  - **Clinical Lab Setup**: Expanding manufacturing, opening **orthotic-fitting labs** at Emory.
  - **Telehealth Integration**: Scaling **Invisa.ai™** for remote monitoring, improved adherence.
- **Revenue**: $5–10M by Year 2
  - **Orthotic Sales**: 300–500 patients beyond pilot group (rehab centers, VA hospitals).
  - **Subscription Model**: Telehealth subscriptions for ongoing care.
  - **Potential Grants**: Non-profit or corporate sponsors to offset Emory overhead.

Phase 3 (24–36+ months)

- **Expansion Capital**: ~$8–12M
  - **Commercial-Scale Production**: Full manufacturing lines, robust distribution channels in Georgia.
  - **Insurance Coverage**: Positive clinical outcomes drive insurer reimbursements (Medicare, Medicaid, private).
- **Revenue**: $15–20M by Year 3, $20–30M by Year 5
  - **High-Volume Sales**: Widespread adoption in Georgia hospitals/clinics, plus multi-state expansion.
  - **Telehealth Revenue**: Recurring income from AI-driven remote monitoring.

5-Year Financial Outlook

Year	Cumulative Investment	Annual Revenue	Key Drivers
Year 1	~$3–5M	Minimal	Pilot production, case study, R&D
Year 2	~$8–12M	$5–10M	Expanded clinical labs, initial device sales
Year 3	~$15–20M	$15–20M	Commercial-scale production, insurer coverage
Year 5	~$25–30M	$20–30M	Multi-state distribution, telehealth revenue

- **IRR**: **15–20%** over **5–7 years**
- **Breakeven**: **Year 3**, driven by **high-margin orthotics** and **telehealth subscriptions**.

- **3x ROI**: By **Year 5**, leveraging **insurance reimbursements**, **broad consumer adoption**, and **nationwide expansion**.

10-Year Outlook

- **Orthotics Market Penetration**: **25–30%** U.S. share in AI-driven solutions, potentially **$100M+** in annual revenue.
- **Global Reach**: Partnerships with **international clinics**; new AI solutions for sports medicine, geriatric care, and post-surgical rehab.

15-Year Outlook

- **MedTech Powerhouse**: Tens of thousands of jobs, **billions in cumulative revenue**, global leadership in AI orthotics R&D and manufacturing.

Return on Investment & Risk Mitigation

- **Diversified Revenue Streams**: **Device Sales** (Invisabrace®, InvisaSole®), **Telehealth Subscriptions** (Invisa.ai™), **Insurance Reimbursements** (Medicare, Medicaid, private).
- **Phased Investment**: Each stage is contingent on **clinical** and **market validation** milestones.
- **Strategic Partnerships**: Emory & Georgia Tech lower R&D risk; corporate sponsorships reduce pilot costs; insurer engagement speeds up reimbursement.
- **Clinical Trials**: Rigorous data ensures **efficacy**, **cost-savings**, and acceptance by healthcare systems and payers.

Conclusion

These **financial projections** confirm the **Georgia initiative's** high-growth potential. By **Year 5**, **$20–30M** in annual revenue is achievable, with strong clinical validation, **multi-state expansion**, and broad **insurance coverage**. Over **10–15 years**, the **AI-driven orthotics market** could exceed **$100M+** in annual revenue, anchoring Georgia as a **global medtech leader** and delivering a **lucrative return** for investors in a **rapidly expanding** healthcare sector.