

## **Start-up idea: DiaTrack**

**Empowering Lives with Seamless, non-intrusive continuous Diabetes Monitoring**

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## **1. Executive Summary**

The paper explores the entrepreneurial process for developing a photothermal detection glucose monitoring device for diabetic patients in the Indian healthcare market. The paper utilises a framework designed by Shane and Venkataraman (2000) to evaluate market attractiveness, study technological readiness, discover market inefficiencies and plan for exploitation through disciplined validation and resource mobilisation. The business model canvas adopts a hybrid approach, amalgamating product sales with a software-as-a-service (SaaS) health analytics system, supporting scalability and sustainable revenue channels. The founding team's readiness is assessed through T-shaped skills and effectual logic that indicate a strong alignment between the entrepreneurial venture and the team's capabilities while simultaneously addressing critical capability gaps through a strategic recruitment plan. The paper also incorporates a sequential de-risking and scaling financial plan, supported by a staged financial model and targeting healthcare-focused angel investors.

Customer education and regulatory approval timelines represent the potential challenges during the early stages of scaling. The position of this venture through an evidence-based approach supports its journey to commercial success and social impact within the Indian growing diabetic market.

## **2. Introduction: Why healthcare and diabetes**

Millions of people in India silently struggle with managing diabetes and the changes it brings in their lives. The hardship is magnified when quality healthcare services become unaffordable or inaccessible. The story behind a statistic on diabetes is exemplified when suffering becomes personal. In the founding team's families, there are many testimonies of loved ones whose lives revolve around the careful management of their daily chores and conditions, where even the minutest activities ought to be planned with caution and constant vigilance. Our team's entrepreneurial journey isn't solely based on market opportunity; its foundations are laid in a deep sense of responsibility towards society. The decision to choose healthcare came with a unanimous belief that access to health, dignity and hope should be a right, and not a luxury. At its core, we envision a solution that brings simplicity, accessibility and affordability in the healthcare sector for the people who need it the most.

## **3. Entrepreneurial process — how the opportunity was developed by the team**

The entrepreneurial opportunities - identification and development - require a structured and evidence-based process. Building on the scholarly work of Shane & Venkataraman (2000), which examines how opportunities to create future goods and services are identified, evaluated and exploited, our venture addresses the pressing societal needs while offering a strong potential for commercial success.

To systematically work on the entrepreneurial venture, our team distributed the process into a pragmatic framework influenced by the phases outlined by Shane and Venkataraman (2000) - **Problem Identification → Opportunity Recognition → Validation Planning → Commitment to Execution.**

**3.1. Problem Identification**

For the first phase, problem discovery/Identification, our team recognised the entrepreneurial opportunities by identifying the market size, market inefficiencies and unmet customer needs. Through secondary research, healthcare market analysis, and dialogues with healthcare professionals and customers, we observed a substantial gap in affordable and accessible blood glucose monitoring for diabetic patients in India. The secondary research also revealed a huge need in the Indian market for an affordable, effective and non-invasive solution.

India stands at the second position globally for the most number of diabetic patients, with more than 100 million people (11.4% of the total population) estimated to be living with type 2 diabetes (Sharma et al., 2024), while 136 million people predicted to be pre-diabetic (Anjana et al., 2023). The compelling problem of diabetes, limited availability of continuous glucose monitoring (CGM) technologies, affordability and their intrusive process offered our team a scope for innovation, business opportunity and social impact.

This recognition resonates with the concept of trend-driven opportunity development, where rising chronic disease prevalence, technological advancements, and affordability challenges converge to create favourable entrepreneurial conditions.

**3.2. Opportunity Recognition**

In the opportunity recognition stage, we assessed the opportunity against four primary criteria: market attractiveness, timing, profitability and value-creation and founder-resource fit.

**3.2.1. Market Attractiveness:**

The market for diabetic care is increasing rapidly, driven by changes in lifestyle, ease of consumption through quick commerce and online food delivery. More than 136 million people are considered to be pre-diabetic, and the current estimation of type 2 diabetic patients in India is more than 100 million (Sharma et al., 2024). Fig 1 Shows the year on year growth of diabetic patients in India from 1990 to 2045 (projected). Table 1 shows the distribution of diabetic patients across 15 states with the highest prevalence of diabetes and prevalence of prediabetes in percentage.

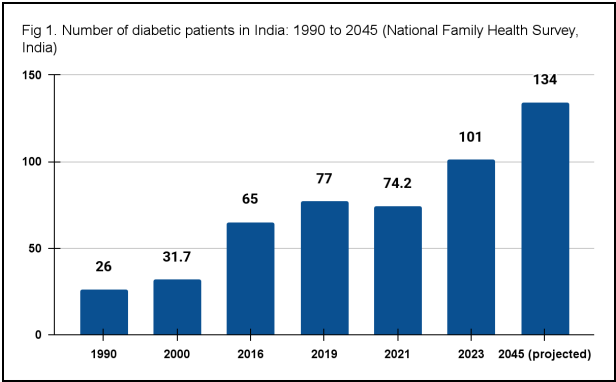


Table 1. Prevalence of diabetes and prediabetes in Indian states (in %)						
States/UT	Prevalence of diabetes (%)			Prevalence of prediabetes (%)		
	Urban	Rural	Overall	Urban	Rural	Overall
Andhra Pradesh	12.6	6.3	8.4	11.1	9.6	10.1
Arunachal Pradesh	5.8	4.9	5.10	14.2	12.3	12.8
Assam	12.4	4.4	5.5	13.6	11.6	11.9
Bihar	10.5	3.5	4.3	15.5	9.3	10.0
Chandigarh	14.2	8.3	13.6	14.5	14.7	14.6
Gujarat	9.5	5.1	7.1	8.4	11.5	10.2
Jharkhand	13.5	3.0	5.3	10.7	7.4	8.1
Karnataka	11.1	5.6	7.7	14.1	10.2	11.7
Maharashtra	10.9	6.5	8.4	15.2	11.1	12.8
Manipur	7.1	4.4	5.1	7.2	7.5	7.5
Meghalaya	8.9	3.5	4.5	7.4	10.6	10.0
Mizoram	7.9	3.6	5.8	6.2	5.8	6.0
Punjab	12.0	8.7	10.0	8.6	7.9	8.2
Tamil Nadu	13.7	7.8	10.4	9.8	7.1	8.3
Tripura	15.5	7.2	9.4	16.2	14.2	14.7

### 3.2.2. Timing

Recent advances in photothermal detection-based biosensor technology enable painless glucose monitoring, providing a technological inflexion point.

### 3.2.3. Profitability and value creation

Our team intends to adopt a two-sided strategy to reduce production costs, Design-to-Value (DTV) and Strategic Supplier Partnerships. The DTV strategy focuses on designing only essential features to minimise material costs, while the strategic supplier partnerships can complement the cost reductions through access to high-quality components at negotiated lower prices. Together, this can increase product affordability without compromising its quality.

### 3.2.4. Founder-Resource Fit

Our backgrounds in computer science, strategy consulting and political consulting provide a healthy mix to develop the commercial and technological aspects of the opportunity. However, a co-founder/team member is required who brings medical expertise to the team.

A medical expert also increases the credibility of the product, while at the same time, their medical network can also support the venture in gaining further traction in the medical industry.

Through this evaluation, we can conceptualise a solution that uses a non-invasive CGM device, which is affordable and integrated with the mobile application to monitor the sugar levels of a patient.

### **3.3. Validation Planning**

Shane and Venkataraman (2000) highlight that opportunities must be evaluated rigorously before exploitation. By discovery-driven planning principles (McGrath, 1995), we structured our validation strategy as follows:

#### **3.3.1. Primary Market Research**

Interviews with diabetic patients, caregivers and healthcare providers to discover pain points, usability preferences and purchasing capacity.

The current CGM devices involve significant recurring costs, rendering them inaccessible to the majority of Indian consumers. Simultaneously, customers' testimonials revealed that the frequency of utilising the current products significantly decreases due to the intrusive process, where the patient needs to prick their finger to test their blood samples every time.

For caregivers and healthcare providers, monitoring a patient's sugar level over time becomes challenging since the current blood glucose meters used in the Indian market do not allow for data storage and analytics. For caregivers, another prominent challenge was to build the discipline of testing the patient's sugar levels at regular intervals and also ensuring that the patient also builds the same discipline without any physical supervision.

#### **3.3.2. Technical Feasibility Analysis**

Our team also intends to collaborate with biomedical research institutions to assess the manufacturability of photothermal detection CGM patches at scale. While at the same time, meet the efficacy rates provided by the competitor's glucose monitoring devices.

#### **3.3.3. Prototype Development and Regulatory Assessment**

Developing a minimum viable product (MVP) to enable functional testing. Early consultation with regulatory and medical experts to outline the pathway for approvals from Indian regulatory bodies.

#### **3.3.4. Pilot Market Launch:**

Implementation of pilot programmes with partner diabetic clinics to gather real-world performance data. This structured validation process is aimed at de-risking the venture before committing a higher volume of resources. Recognising the risks inherent in early-stage healthcare ventures, particularly technological scalability challenges and

regulatory hurdles, we plan to parallel-track alternative device designs and engage in early pre-submission meetings with regulatory authorities. To mitigate market adoption risks, educational initiatives targeting diabetic associations and healthcare providers will be incorporated during pilot launches.

### 3.4. Commitment to Execution

After successful validation, the last stage involves opportunity exploitation. Our execution strategy involves 5 pillars:

1. **Incorporating the Company:** Formation of a private limited company in India to formalise governance, facilitate IP protection, and enable investment readiness.
2. **Go-to-Market Strategy:** The first phase of launch will be direct-to-consumer (D2C) digital channels to build a strong brand, have control over customer relationships for faster feedback and improvement cycles, and bundle products with other services (like insurance, subscription, technological services and upgrades). Since the healthcare business strongly relies on feedback and recommendations from doctors, a close relationship with doctors will be an invaluable addition to the strategy. A simultaneous B2B model with pharmacies will be paramount to increasing the sales in the Indian market, where customers, at times, bypass the doctors to purchase medical products.
3. will support the leveraging of the consumerisation of healthcare systems. Over time, the mobile application can evolve into a health data platform, allowing integration with insurance companies, dietitians, and fitness professionals, creating a **multi-sided platform ecosystem**.
4. **Resource Mobilisation:** Raising INR 2–3 crore through healthcare-focused angel investors and venture capital firms, applying a staged financing model aligned with validation milestones.
5. **Team Building:** Expanding the founding team with expertise in biomedical engineering, regulatory affairs, and product design, recognising the critical role of cross-functional teams.
6. **Data and Intellectual Property Strategy:** Building proprietary predictive analytics algorithms and securing intellectual property protections to ensure sustainable competitive advantage.

These pillars will enable the team to move beyond the discovery and evaluation stage and exploit the opportunities to support the creation of a scalable intervention in the MedTech industry.

Our entrepreneurial process closely mirrors the theoretical framework articulated by Shane and Venkataraman (2000), moving through the phases of opportunity discovery,

evaluation, and exploitation. By anchoring our venture within a real societal problem, critically assessing the feasibility and attractiveness of the opportunity, validating through structured experimentation, and committing to a disciplined execution strategy, we position ourselves to transform a compelling idea into a scalable healthcare innovation with significant social and economic effects.

#### **4. Business model (digital) used by DiaTrack**

Photothermal detection is a technique where light energy, typically from a laser, is absorbed by a material and converted into heat, causing a measurable change such as thermal expansion or refractive index variation. In the context of glucose monitoring, photothermal detection enables highly sensitive measurement of glucose concentrations by tracking these subtle heat-induced changes, allowing for non-invasive or minimally invasive glucose sensing.

Our photothermal detection glucose monitoring device adopts a hybrid digital business model that amalgamates physical product sales (the glucose monitoring device) with software-as-a-service (SaaS) components as its digital component. This strategy strengthens the value proposition of the company by incorporating non-intrusive sugar testing with real-time data monitoring and accountability systems.

Business Model Canvas is used to describe the logic and framework of the business model due to the complexity of our offering, which combines a physical device, digital health services and multiple partnerships. The business model canvas is more suited to capture an entire business ecosystem, including the key players/regulators and commercial aspects. Especially in a MedTech venture where regulations and partnerships drive growth potential, a thorough understanding of the ecosystem and their interconnection are invaluable insights that can contribute to the business' success. It also provides a more strategic and scalable view, which is pivotal in planning for growth and attracting healthcare-focused investors.

In this following section, we provide a detailed overview of the different components of our business model canvas along with a short summarised version of the business model.

##### **4.1. Value Proposition**

We shaped our business model by first asking ourselves a simple but profound question: what meaningful difference can we create in people's lives?

Through this question, our quest to work on the healthcare sector and thorough research (primary and secondary), we identified a major gap – the burden of living with diabetes and its impact spilling over from medical to emotional and financial. The existing products were either too expensive or intrusive (which limited the scope of continuous and regular monitoring) and thus inaccessible for the average Indian patient.



We worked on our value proposition and customer segments simultaneously, crafting a sequential link between a value offered to each of our customer segments. The distillation of this exercise reflects in our value proposition: a non-intrusive, affordable and intelligent photothermal detection glucose monitoring device that provides personal and actionable insights to our customers via a mobile app.

#### **4.2. Customer Segments**

With this clear value proposition, we naturally identified our customer segments: diabetic individuals (from urban and semi-urban India), healthcare clinics and hospitals aiming for better patient outcomes and insurance companies attempting to reduce the long-term treatment costs.

#### **4.3. Channels**

The next natural step was to decide how we connect to the customer segments we have identified to deliver the value. We chose a mix of direct digital channels and partnership.

Once we identified who we are serving – individuals managing diabetes, hospitals, and clinics – the next natural step was to decide how we will reach them.

We chose a mix of **direct digital channels** and **partnership-driven channels** to ensure affordability and accessibility.

For individuals, we plan to sell directly using our own website and an e-commerce platform – selling directly to consumers enables the company to increase the profit margins while at the same time building brand awareness and identity. The second channel we would explore would be pharmacies to expand selective offline channels.

**Doctor Recommendations (Channel):** Trusted healthcare providers act as influencers by recommending our device directly to patients during consultations, enhancing credibility and encouraging adoption. Their endorsement helps bridge the gap between medical need and patient action.

**Marketing Channels:** We will use digital marketing (social media, targeted ads, content marketing) and collaborations with healthcare influencers to raise awareness. Educational campaigns focusing on diabetes management will help build trust, reach wider audiences, and drive traffic to our website and partner pharmacies.

#### **4.4. Customer Relationships**

In the next section, customer relationships, our core focus was to focus on building a customer journey that integrates personalised regular health insights through the app and customer support system backed with AI models. To engage the customers beyond the products and increase their interaction with the brand ecosystem, we will create a community space where customers can

attend webinars with doctors, share healthy and tasty recipes, track collective health goals and celebrate milestones together. By becoming a trusted daily partner, we aim to foster loyalty, encourage referrals, and build a vibrant, supportive community around our brand.

#### **4.5. Revenue Streams**

Our primary revenue stream will come from the direct sales of the devices through our websites and pharmacies. To complement this and maintain a healthy revenue stream, we will also offer a subscription-based model within the mobile app, where users can access premium health insights, such as personalised tracking, early warnings and reminders and curated diet plans. These subscription models will be customised according to different cost structures.

The other source of revenues will be insurance companies and healthcare providers who can open doors for B2B revenues by integrating the device into preventive care programmes.

#### **4.6. Key Resources**

Our key resources include the core photothermal technology and mobile applications that power the customer experience. Just as important is customer trust, built through strong onboarding, continuous support, and community engagement. A skilled team — from biomedical engineers to regulatory experts — will drive product quality and growth. Finally, strategic partnerships with pharmacies, clinics, and insurers will extend our reach and reinforce credibility.

#### **4.7. Key Activities**

Our key activities will revolve around three cornerstones: technology development, regulatory approvals and customer engagements. Refining the photothermal detection device and the application will be an ongoing priority along with user satisfaction. Regulatory certifications will be a supplementary activity that would be monumental for credibility and market access.

Simultaneously, engaging and educating customers through engagement channels will be critical for strengthening loyalty and advocacy. Nurturing partnerships with healthcare providers and pharmacies will also be central in expanding the reach of our venture and driving product sales.

#### **4.8. Key Partnerships**

Strategic partnerships across the healthcare ecosystem, such as pharmacies and healthcare clinics, will serve as vital distribution points and visit trust anchors where customers can discover and test the products.

Doctors and diabetes specialists will be key partners, offering trusted recommendations and creating a demand pull.

Partnerships with regulatory consultants will be essential for acquiring certification that would serve as credibility generators, while technology providers like Amazon Web Services and Azure will support in strengthening data security and cloud hosting. These partnerships will support us

in building an ecosystem that will support organic product discovery and customer loyalty, leading to a stronger pull-based growth engine.

#### **4.9. Cost Structures**

The cost structure reflects our core focus: building trust and offering quality and scalability while maintaining affordable price points for our customers to ensure accessibility. To translate this focus into actionables, the major cost block will include research and development for product innovation and app integration, production costs for the photothermal sensors and expenses related to regulatory certifications.

Simultaneously, customer acquisition costs that include marketing, doctor partnerships and pharmaceutical tie-ups will also be essential in the growth phase.

Operationally, technology maintenance for the app and community management will also involve investments to ensure user engagement. We aim to balance cost efficiency by streamlining manufacturing processes and building trusted supplier relationships. Human capital will also act as a major cost driver, along with additional costs, which would include payment gateway fees, cloud servers and cybersecurity.

#### **5. Background of the team: Required skill set to succeed?**

Our founding team's background reflects a strong alignment with the T-shaped skills model, a critical framework for entrepreneurial success. The **"vertical" dimension** of our skill set is deeply rooted in technical expertise. Both founders possess degrees in computer science, which allows us to handle core technological components essential for building a photothermal detection-based continuous glucose monitoring (CGM) device — from AI-based data analytics to mobile application development and cloud integration. This technical depth ensures that the fundamental product innovation is firmly within our own capabilities.

At the same time, the **"horizontal" dimension** of our profile demonstrates a breadth of interdisciplinary skills crucial for successfully launching a healthcare technology venture. One founder's experience in strategy and innovation consulting equips us with the ability to design scalable business models, craft go-to-market strategies, and manage organisational growth. Meanwhile, the second founder's exposure to political consulting adds valuable competencies in stakeholder management, policy navigation, and public sector engagement — all critical in a highly regulated industry like healthcare.

Moreover, our ongoing MBA studies have broadened our business acumen across finance, marketing, operations, and entrepreneurship, strengthening our ability to work across functional areas and make strategic decisions under uncertainty. This blend of depth in technology and breadth across strategy, regulation, and business operations positions us well to bridge technical development with market needs — a hallmark of successful venture creation.

However, as is common in highly specialised sectors, we also recognise key gaps along the T-scale:

- To reinforce the **"vertical" technical axis**, we plan to onboard a biomedical engineer with specialisation in sensor technology and material science, strengthening the prototyping and product development phase.
- To further expand the **"horizontal" breadth**, especially in regulatory navigation, we will engage a regulatory affairs specialist familiar with CDSCO approval processes to ensure smoother clinical validation and compliance.

As our venture matures, hiring a health economics expert will additionally help tailor our business model to the pricing dynamics of India's healthcare market. This strategic extension along both axes of the T-shape — deeper technical specialisation and broader regulatory and market expertise — will ensure we remain agile, resilient, and well-equipped to build and scale an impactful healthcare innovation.

## 6. Financial Plan

Financial planning is a cornerstone of entrepreneurial success, particularly in the context of innovation-driven ventures operating in complex and regulated sectors such as healthcare. A realistic financial plan not only guides operational execution but also forms the foundation for engaging with investors and strategic partners. Given the nature of our startup — delivering affordable photothermal detection-based continuous glucose monitoring devices in India — our financial plan adopts a pragmatic, staged approach that prioritizes capital efficiency, risk management, and early validation of key business assumptions.

### 6.1. Financial Plan

The first year focuses on validation, early product development, and preparing for market entry. Our financial structure reflects a **"start small and grow"** philosophy, as recommended for early-stage ventures.

### 6.2. Revenue

Given that product development and regulatory approval require substantial lead time, we do not anticipate significant revenue generation in the first year (validation and testing phase). Initial revenues may emerge only toward the end of the year if pilot programs convert into early sales agreements. Year 2 (Market Entry Stage) is when the first market ready versions of the product would be rolled out and the revenues will start increasing. End of year 2 will also be channelised in expanding the channels for revenues; via D2C sales and B2B model (pharmacies and hospitals) and launching the subscription model. Year 3 (Growth & Expansion Stage) will specifically focus on expansion into Tier 2 and Tier 3 cities, strengthening the B2B partnerships and growing SaaS subscription.

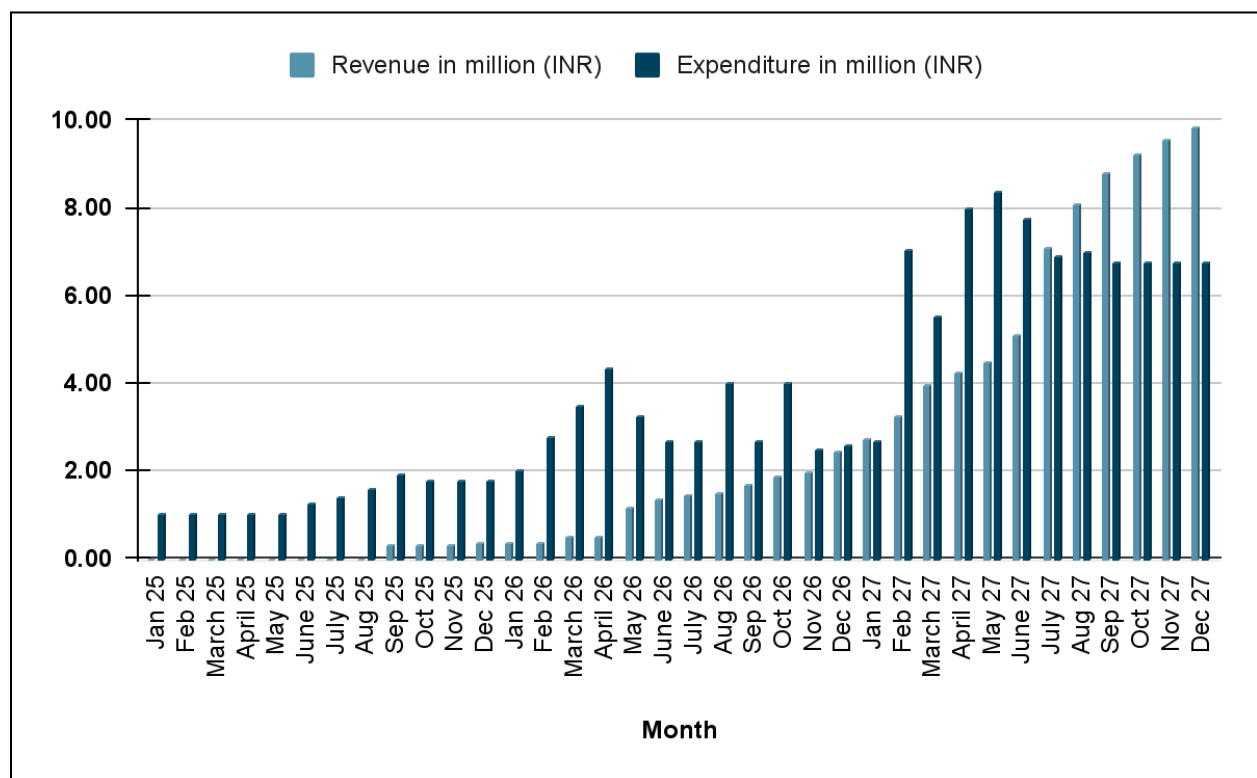
For year 1 (2025) and year 2 (2026), the business will run under operational deficit and in July 2027, we achieve a breakeven point followed with a net positive for the rest of the year.

### 6.3. Costs

The major cost components for the venture would include: R&D, Regulatory and compliance, Salaries and bonuses, Tech Infrastructure (cloud hosting, platform maintenance), Admin and legal, Marketing & sales, material costs/production costs, pilot program costs, office rent and an infrastructure, Customer support, sales expansion and miscellaneous costs like travel costs, reimbursements etc.

For a detailed breakdown of revenues and cost please click on this link:

<https://docs.google.com/spreadsheets/d/1apgoS7ynWasKVDvCu1V9z4eTl1LTlOMNHvjBh5y8ats/edit?usp=sharing>



### 6.4. Short to Medium Term Goals

We've structured our primary goals across three phases—Year 1: prove it works, Year 2: launch it smartly, Year 3: grow it sustainably.

#### → Year 1 (Validation Stage):

- Focus on product development and regulatory approval.
- Minimal revenues; primary focus on technical and clinical validation.

- Perform Limited pilot launch (for example ~200-400 units) through popular hotspot diabetes clinics in metropolitan cities like Mumbai-Delhi-Kolkata-Hyderabad for real-world validation.

→ **Year 2 (Market Entry Stage):**

- Post-approval, full market launch through direct-to-consumer, retailers and partnerships (like mentioned in the Business Model Canvas).
- Initial revenue streams from device sales.
- Introduction of subscription-based services on the mobile platform with a yearly payment (very affordable).

→ **Year 3 (Growth and Expansion Stage):**

- Expansion to Tier 2 and Tier 3 cities through partnerships with insurance companies and public health programs including NGOs.
- Growth of SaaS subscription revenues through personalized health analytics services.
- Potential exploration of international markets in South Asia.

Projected revenues by the end of Year 3 are estimated to reach INR 15–18 crore (approximately USD 2 million), assuming conservative penetration rates within the Indian urban diabetic population.

## 7. Startup Valuation Approach

Valuing early-stage startups, particularly those pre-revenue or pre-profit, presents significant challenges. Traditional methods based on discounted cash flows are often inapplicable due to high uncertainty. Consequently, for our venture, we adopt a hybrid valuation approach combining the **Venture Capital (VC) Method** and the **Scorecard Method** recommended for early-stage startups.

Based on conservative market penetration estimates, our projected revenues for the three financial years would be:

- Year 1:** ₹0.142 crore (1.42 million)
- Year 2:** ₹1.536 crore (15.36 million)
- Year 3:** ₹7.650 crore (76.50 million)

### 7.1. Venture Capital (VC) Method

This method offers a pragmatic approach in estimating the projected future revenues and expected returns as a basis of valuation. To calculate the future revenues (year 4 and year 5), we assume a gradually declining growth; for year 4 ~ 90% and for year 5 ~ 70%. These declining growth rates provide a realistic picture to the venture capitalists (Businesses growth declines after growth phase). Yet, the significantly high growth rates of 90% and 70% are due to our

expansion plans into additional metropolitan and tier 2 cities. Additionally the maturity of the brand identity in year 4 and 5, will also contribute to its initial exponential growth.

**Year 4:** ₹14.535 crore (90% growth from Year 3)

**Year 5:** ₹24.7095 crore (70% growth from Year 4)

We can calculate the valuation using the following steps:

**a. Estimate the Exit Value**

Assuming a conservative exit multiple of 5x revenue at the end of Year 5, which amounts to an exit value of ₹123.54 cr. (Revenue for year 5 \* exit multiple)

**b. Determine the Pre-Money Valuation**

Since venture capital investors typically looks for a 10x return on early-stage investments, the pre-money valuation would amount to: ₹12.35 crore (Exit value/estimated return (10x))

**c. Post-Money Valuation and Equity Dilution**

For an projected ₹ 2.5 crore initial investment, the post money valuation would be: ₹14.85 crore (pre money valuation + initial investment)

In this case, the equity stake to be offered to the investor would be 16.83% (approximately) ( $\text{Equity} = (\text{Initial investment} / \text{post money valuation}) * 100$ )

## **7.2. Scorecard Method Adjustment**

Another key challenge in estimating the value of early-stage startups, especially in innovation-driven sectors like healthcare technology, is high market volatility and absence of stable revenue streams. For entrepreneurial ventures at this stage, traditional methods often act inappropriate and provide a very limited assessment of their growth potential. Therefore, to estimate the valuation of our venture and double-check the results from the venture capital method, we employed the Scorecard Method. Scorecard method, a valuation approach tailored for start-ups in their early development phase.

The Scorecard method evaluates the valuation of a venture by comparing it with another startup that is already funded, along with other criterias, such as management team, market size, product or service, competitive environment, marketing (sales channels) & partnerships, and need for additional investment. These parameters are given a weightage and the sum of the weightage is then multiplied by pre-money and post-money to calculate the valuation.

To begin, we considered the average pre-money valuation of early-stage healthcare technology startups in India, which is approximately INR 10 crore (regional average valuation), based on market observations and recent funding data.

As the second step, we calculate the weighted score for the six factors included in scorecard method evaluations.

Factor	Weight	Relative Score	Weighted contribution
Management Team	30%	1.2	0.36
Market Size	25%	1.3	0.325
Product or service	15%	1.2	0.18
Competitive Environment	10%	0.9	0.09
Marketing, sales channels & partnerships	10%	1.1	0.11
Need for Additional investment	10%	0.9	0.09
<b>Total</b>	100%		1.155

We can apply the weighted score of 1.155 to calculate the adjusted pre-money valuation: ₹11.55 crore (regional average valuation \* weighted score)

For post money valuation, we add the pre-money valuation with the money raised by the venture in its initial funding round. This would amount to ₹14.05 crore (₹11.55 crore + ₹2.5 crore).

This would result in early investors acquiring approximately 17.8% ownership in the company.

## 8. Financing the startup and implementing the funding

Securing financing at the initial stage is a critical task for our healthcare venture. Given our innovation at the early stage and inherent uncertainties surrounding regulatory approval, product development, and market acceptance, we plan to adopt a low-budget, milestone-driven financing model. This approach aligns with best practices in entrepreneurial finance, where limited but sufficient resources are deployed to achieve specific validation milestones before seeking larger investment rounds. We aim to raise an initial seed round of approximately **INR 2–2.5 crore (USD 250,000–300,000)** to fund 12–15 months of operations, supporting key milestones such as functional prototype development, regulatory submission to CDSCO (Central Drugs Standard Control Organisation, India), pilot testing, and early customer validation.



Our approach follows a **milestone-driven financing model**, ensuring each capital tranche is tied to specific technical and regulatory achievements, reducing early-stage risk for both founders and investors.

### 1. Target Investors and Rationale

For the initial stage, we intend to approach **angel investors**, particularly those with backgrounds in healthcare, medical technology, or early-stage technology investing. Business angels are typically more flexible, patient, and entrepreneur-friendly compared to institutional venture capitalists at this early phase (Mason & Harrison, 2002). In particular, we will prioritize:

- **Healthcare-focused Angel Networks:** Groups like Indian Angel Network (IAN) or HealthStart India that specialize in healthtech investments.
- **Strategic Angels:** Individual doctors, healthcare administrators, or biomedical entrepreneurs who can provide not just capital but also domain expertise, industry connections, and early credibility.
- **University-based Entrepreneurship Funds:** Given our MBA affiliation, tapping into university entrepreneurship centers or alumni funds that support healthcare startups could also be strategic.

### 2. Conditions and Structure of Funding

In negotiating with initial investors, we intend to implement specific conditions to ensure alignment of incentives and to protect the long-term strategic integrity of the venture:

- **Equity Dilution:** We plan to offer a **15–20% equity stake** for the initial INR 2–2.5 crore investment, based on a pre-money valuation in the range of **INR 12–15 crore** (approximately USD 1.5–1.8 million), as estimated using the Venture Capital Method and Scorecard Method for early-stage valuation.
- **Milestone-Based Tranches:** To minimize risk for both founders and investors, we propose that funding be released in two tranches — the first upon signing the agreement, and the second upon achieving critical milestones such as completion of functional prototype and regulatory application submission.
- **Governance Rights:** We anticipate granting investors certain governance rights, such as board observer status or quarterly information rights, without ceding operational control at this early stage.

- **Anti-Dilution Protection:** We are open to offering mild anti-dilution protection (weighted average adjustment) for the first round investors in the event of future down-rounds, but would avoid full-ratchet provisions to maintain future fundraising flexibility.
- **Exit Strategy Planning:** Aligning exit expectations early is critical. We would structure investor agreements to include expected exit timeframes (5–7 years) and optional liquidity mechanisms, such as drag-along rights in case of acquisition.

Our financing model is designed to reconcile the inherent tensions between investor protection and entrepreneurial flexibility during the critical early stages of venture development. Drawing on established principles of entrepreneurial finance, we propose a milestone-based funding approach through healthcare-specialized angel investors. This structure provides necessary capital while preserving strategic autonomy, with equity dilution carefully calibrated to maintain founder control during the high-risk validation phase. The tranching investment mechanism links funding to concrete technical and regulatory achievements, creating alignment between investor interests and venture milestones. As the product progresses from clinical validation to commercial rollout, this disciplined approach ensures sufficient runway for iterative development while retaining capacity to adapt to market feedback. The model positions the venture for sustainable scaling, with subsequent funding rounds timed to coincide with de-risking milestones and revenue inflection points.

## 9. References

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