

Preliminary Business Case for Apex Desk Bike

| Section | Description |
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| Market Situation | <ul style="list-style-type: none"> • The global Under-Desk Bike Market is currently valued at approximately \$2.06 billion (2025/2026) and is experiencing a massive growth trajectory, projected to reach over \$9 billion by 2033. • Key Drivers: The "Sedentary Crisis." With 76% of U.S. adults considered physically inactive and the average remote worker sitting for over 10 hours a day, consumers are looking for "passive fitness" solutions that don't require extra time outside of work. • Our target audience consists of time-constrained professionals aged 20-45, broken down into two generational segments: <ul style="list-style-type: none"> ○ Gen Z aged 20-29 primarily focused on appearance, but also mindful of health ○ Millennials aged 30-45 primarily focused on health, but also mindful of appearance ○ Both segments are "time-poor" professionals working long hours and unable to attend the gym. ○ They are receptive to innovative wellness solutions that integrate physical activity into daily routines without disrupting work. |
| Opportunity | <ul style="list-style-type: none"> • Sitting for extended periods is known to cause health problems, sedentary fatigue, and ergonomic strain. • The standard work week contributes by increasing sitting and decreasing the available time for exercise. Additionally, remote work that requires sitting has become popular. • People need a way to get more exercise while working, but right now they are limited to standing desks, walking desks, or bulky bikes. • People who want to bike can purchase a bike with a tiny attached desk, or they need to purchase a separate desk and bike, which is expensive, and the two parts may not fit together well. • Our company can tap into this gap and be first to create a pro-grade ergonomic solution that solves integration problems. |
| Envisioned Solution | <ul style="list-style-type: none"> • Our desk bike is the market's first modular active workstation. Unlike competitors' cramped all-in-ones or standalone bikes with compatibility issues, we provide a professional-grade, full-size desk engineered to dock perfectly with whisper-quiet high performance cycle. By eliminating industry-standard subscription fees and providing a seamless biometric app experience, we |

remove the paywall to health.

- Desired features include:
 - Full size desk
 - Bike that is fully equipped with exercise options and programs
 - Ability to separate desk and bike
 - Built-in sensor straps and recording of biometric data
 - Smartphone app that logs exercise and data
 - Subscription free / one time purchase
 - Rewards and competitions
 - Free shipping
- Buyers want equipment that is:
 - Safe
 - Durable
 - Reasonably priced
 - Available online
 - Easily repaired
- Success measure include:
 - Passes safety tests
 - Free shipping for joining our Wellness Community with data tracking
 - 4.5 star rating of smartphone app within 6 months
 - Checkout conversion rate of >3%
 - 95% of orders delivered within 72 hours
 - Secure payment systems
 - Easy returns
- The team arrived at this solution after VoC analysis of 50 interviews with remote workers, secondary research, market investigation, competitive analysis, and market feedback on prototypes.
- The competition focuses on less expensive units with a small built-in desk, as well as high-end models with many features but no desk included. Bulky bikes do not fit with most desks. Competitor disadvantages: smaller desk space, more expensive, integration issues between separate desks and bikes, standing desks that lead to fatigue, walking desks that are noisy.
- There are no other full size desk bikes on the market. We can produce a bike desk with modular versatility that fits together properly, which allows people to bike while working. The bike and desk can be separated for convenience. The bike desk will be equipped with built-in sensor straps and have an accompanying smartphone app that records exercise and biometric data. Currently, customers must pay an additional monthly

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| | <p>subscription fee to access these features, but we will offer it free of charge, which will differentiate us from competitors.</p> |
| <p>Objectives and Assumptions</p> | <ul style="list-style-type: none"> ● Objective 1 (Market Penetration): Capture 5% of the "Integrated Active Workstation" market within the first 12 months of launch. ● Objective 2 (Product Differentiation): Achieve a 4.5/5.0 star user rating for the smartphone app. ● Objective 3 (B2B Expansion): Secure 10 pilot partnerships with "Top 100 Remote-Friendly Companies" to offer the bike as a subsidized wellness benefit by Year 2. ● Objective 4 (Customer Retention): Maintain an 80% "Active User" rate (users pedaling at least 3 times a week) through the free rewards and competition features. ● Market & Consumer Assumptions: <ul style="list-style-type: none"> ○ Assumption A: The "Hybrid Work" trend is permanent. We assume that at least 40% of knowledge workers will continue to work from home at least 3 days a week through 2030. ○ Assumption B: "Subscription Fatigue" is real. We assume that a one-time purchase model will result in a 20% higher conversion rate compared to competitors with monthly fees. ○ Assumption C: Aesthetics matter as much as function. We assume users are willing to pay a 15% premium for a bike that looks like high-end office furniture rather than gym equipment. ● Operational & Financial Assumptions <ul style="list-style-type: none"> ○ Assumption D (Logistics): We assume that "Free Shipping" and a "No-Hassle Return Policy" are the primary drivers of conversion for large hardware. We believe that by removing the upfront financial risk of shipping and the logistical fear of returns, we will capture a "hesitant" segment of the market that currently avoids heavy ergonomic equipment. ○ Assumption E (Manufacturing): We assume we can source a "low-profile" magnetic resistance silent-drive system that fits under a standard 29-inch desk height without exceeding a COGS (Cost of Goods Sold) of \$250. ○ Assumption F (Data Value): We assume that the anonymized biometric data collected from consenting users will eventually be valuable enough to sell to health insurance providers or corporate wellness researchers, creating a secondary revenue stream. |
| <p>Costs</p> | <ul style="list-style-type: none"> ● Our goal is to spend \$1M to get the product to market (conceiving, planning, prototype development, assembly, storage). We expect to make \$229 profit per unit, meaning we reach our 'Payback Point' and start generating pure profit after our 4,367th sale. |

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| | <ul style="list-style-type: none"> ● Cash Flow: <ul style="list-style-type: none"> ○ Year 0: Cash flow is -\$1,050,000 (Building the product). ○ Year 1: Cash flow turns positive monthly as sales begin, but still recovering. ○ Year 2: The "Payback" happens mid-year. Every unit sold after unit #4,585 is pure profit for the company. ○ Year 3: Cash flow is strongly positive; funds can be reinvested into "Version 2.0" or new desk accessories. ● Payback Period: need to sell 4,585 units to "break even" on initial investment. If we sell 400 units a month, payback period is 11.5 months. ● Resources: Cross-functional personnel resources to fill all required roles (Product Manager, Industrial Designer, Hardware/Mechanical Engineer, Software Engineers, Supply Chain / Logistics Specialists, Marketing Lead) |
| Strategic Alignment | <ul style="list-style-type: none"> ● We are a Fitness Hardware company that will benefit from diversification of revenue, brand modernization, and higher profit margins. ● Goal 1: become the number 1 provider for the remote workforce by offering the first all-in-one solution that solves the ergonomic and logistical issues of home offices. ● Goal 2: sell in bulk to corporations using corporate wellness contracts and employee home-office stipends. ● Goal 3: align the company's long-term strategy to build a digital platform and gather user insights that can inform future product development. |
| Timing | <ul style="list-style-type: none"> ● Describe project timing <ul style="list-style-type: none"> ● Conceive and Plan Phases: February 1 – March 31 <ul style="list-style-type: none"> ○ Milestone: Approved Product Requirements Document (PRD) ● Development and Tooling: April 1 – August 15 <ul style="list-style-type: none"> ○ Milestone: First working model ● Qualify and Safety Certification: August 15 – October 1 <ul style="list-style-type: none"> ○ Milestone: Mass production begins ● Logistics and Pre-launch (October 1 – November 14) <ul style="list-style-type: none"> ○ Milestone: Inventory on-hand in warehouse ● Launch: November 15 <ul style="list-style-type: none"> ○ Milestone: Live website for orders and first shipment ● Urgency consideration: Peloton is releasing a new model in December, and we must release before them to capture the market and benefit from both Black Friday Sales and New Year's health resolutions. ● Investment Strategy |

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| | <ul style="list-style-type: none"> ○ Parallel development of hardware and software teams ○ Agile manufacturing with 200 units for launch and Black Friday, remaining 800 units for January resolutions ○ Concurrent testing of safety and beta-testing |
| Cost Benefit Analysis | <ul style="list-style-type: none"> ● ROI Rate of Return 16% ○ For every dollar spent, the company earns back \$1.16, outperforming typical industry benchmarks. ● IRR Internal Rate of Return 12-15% ○ The project’s growth rate exceeds the hurdle rate, making it a sound financial choice. ● NPV Net Present Value: approximately \$193,000, generating more value than a standard investment. ● If the company does not proceed, it could result in market share erosion as competitors take the lead, brand irrelevance if we do not modernize, and lost competitive intel through data collection for future development. |
| Risk | <ul style="list-style-type: none"> ● Risk A: Lack of brand recognition against competitors like Peloton ○ Mitigation: Aggressive marketing and partnerships with ergonomic influencers and physical therapists, targeting the remote professional niche ● Risk B: Global shipping delays or shortages could push us past our launch window. ○ Mitigation: Make strategic partnerships with suppliers, prepay for components 3 months in advance. ● Risk C: Delay of the November 15 launch means missing EOY Peloton release and New Year’s resolutions, which accounts for 40% of estimated fitness sales. ○ Mitigation: If hardware is delayed, we launch a pre-order reservation campaign on November 15 with guaranteed January delivery, locking in customers before they see Peloton’s December release. ● Overall Cost Leadership: We provide the all-in-one value. Our \$899 integrated solution saves an estimated \$1500 spent on separate bike and desk units. ● Differentiation: Our subscription-free model and modular design offers features competitors don’t. ● Focus on high-quality niche: We are building high-end office furniture for a professional home office, rather than standard gym equipment. |
| Initial Investment and Recommendation | <ol style="list-style-type: none"> 1. Initial Investment Requirements (Year 0–1) <ul style="list-style-type: none"> ● This is the \$1,000,000 previously outlined, focused on Market Entry. |

- Product Realization (\$400k): Covers industrial design, mechanical engineering, and the development of the subscription-free mobile app.
- Inventory & Tooling (\$500k) for the first 1000 units.
- Launch Operations (\$100k) for warehousing and marketing.
- 2. Long-Term Investment Requirements (Year 2–5)
 - As the product succeeds, the "ask" shifts from building a product to scaling a brand.
 - R&D for Version 2.0 (\$250k/year): Developing the next generation of the desk, such as Kinetic Charging (where pedaling powers your laptop) and height-adjustable electronic desk frames, features that justify an increase to the retail price.
 - B2B Sales Infrastructure (\$150k/year): Building a dedicated sales team to pitch to HR departments for "Corporate Wellness" contracts and bulk-buy stipends.
 - Server & Data Maintenance (\$50k/year): Scaling the cloud infrastructure for the smartphone app as the user base grows from 1,000 to 50,000+ users.
 - Global Expansion (\$300k): Investment in European and Asian distribution centers to lower international shipping costs and navigate regional safety certifications.