

The FutureList

BHOUT

Innovation Memo

Innovation In Words








A note from the Head of Brand and Communications of Bhout, Sara Karim:

80% of the population doesn't like to workout despite understanding the importance of taking care of their mental and physical health. We've built the BHOUT Bag on the premise that we can deliver an immersive, fun experience to users while taking care of them — something that the traditional fitness industry failed to do.

Bhout

Executive Summary

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Fit-tech
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Wellness and Fitness Services
- 
bhout.com
- 
\$10.7M
- 
2019

BHOUT is a fit-tech company that has developed the world's first AI-powered boxing bag, revolutionising how individuals approach fitness and training. By seamlessly integrating cutting-edge technologies like artificial intelligence, computer vision, and sensor technology as well as state-of-the-art research in the areas of psychology, nudging and game design into combat sports, BHOUT has created an innovative product that blends physical exercise with gamification elements.

The BHOUT Bag stands out as a unique offering in the market. Its multi-layered design mimics the density of human body tissues, providing a realistic, striking experience. BHOUT is leading the path in a new era of fitness and wellness equipment manufacturing, which is likely to face potential challenges in navigating regulatory hurdles, addressing technological limitations, fostering user adoption, and maintaining a competitive edge in an evolving market.

Despite these potential challenges, BHOUT's future outlook remains promising. With its unique blend of fitness equipment, AI, and gamification, BHOUT is well-positioned to disrupt the traditional fitness market and potentially create a new niche for smart, interactive fitness solutions. As AI, computer vision, and sensor technologies advance, the BHOUT Bag's capabilities could become even more sophisticated, offering personalised training experiences and driving innovation in the fitness industry. The company's gamification elements also present expansion opportunities, potentially creating a more extensive ecosystem or community around the BHOUT platform, akin to existing gaming platforms or esports communities.



Mauro Frota

Founder, CEO & CVO

Mauro is an entrepreneur and visionary in the fitness tech industry. He has been involved with martial arts since childhood, and his academic and professional career has focused on understanding adherence, retention, and motivation in the fitness industry, utilizing gamification as a central strategy for mass adoption. Mauro is passionate about bridging the gap between research and practice, applying true knowledge to BHOUT's hardware, software, and fitness clubs to deliver effective results.



Pedro Barata

Co-founder and CXO

Pedro is a serial entrepreneur and co-founder & Chief Experience Officer at BHOUT. With over 25 years of experience in shaping dreams and changing lives through his ventures, Pedro brings problem-solving mindset and a focus on delivering exceptional experiences and customer satisfaction. At BHOUT, he plays a pivotal role in creating an immersive and engaging "Entertainment" ecosystem that gamifies the fitness experience.

Innovation Spotlight

Core Functionality and Features:

The BHOUT Bag is an intelligent boxing bag that combines physical hardware with AI and computer vision technology.

- The BHOUT Bag has an integrated AI processing unit that connects all the bag's sensors. The bag also enables 3D computer vision technology to track and analyse the user's movements and strikes on the bag.
- Bhout's computer vision system can identify and track various strikes that the user lands on the bag, including punches, kicks, elbows, and knees. This data provides feedback and analysis on the user's technique and performance.
- Also, the BHOUT Bag has multiple sensors embedded throughout its surface, which can detect and measure the power or force behind each strike landed on the bag.
- The BHOUT Bag has a docking station with a water-filled core, which helps absorb the impact of strikes.
- The BHOUT Bag has multiple layers that mimic the density and feel of various human body tissues, such as skin, fat, muscle, and bone. This layered design aims to provide a realistic, striking experience, similar to hitting a human target.
- The BHOUT Bag and App combines fitness equipment with gaming elements, such as creating routines, competing with others, earning virtual currency (JAB\$), building avatars, and introducing a gamified approach to fitness.
- In addition to striking exercises, the BHOUT Bag can be rotated 180 degrees to expose anchor points for attaching elastic resistance bands. This allows users to incorporate strength training exercises into their workout routines using the same equipment.

Design and User Experience

- The BHOUT Bag can be set up as a self-standing unit or mounted on a wall, giving users flexibility in how they want to install it in their home or gym.
- Users enjoy an immersive training experience with mood lighting and music synced through the BHOUT app. The BHOUT app integrates with the bag to provide a unique training experience by synchronising mood lighting and music to match the desired intensity of the workout routine.
- Users can create customised routines or choose from community-created routines with their own avatars.

Performance Metrics

- The BHOUT Bag can receive full-power strikes, which suggests it is designed to be durable.
- The bag's integrated AI processing unit and advanced computer vision enable it to identify and track every punch, kick, elbow, or knee strike, offering users real-time feedback on their technique and performance.

Compatibility

The BHOUT Bag integrates with the BHOUT app, a crucial component of the overall experience. The app syncs with the bag's sensors and computer vision system to provide data and feedback to users.

Safety, Compliance, and Sustainability

- The bag's design and materials are soft enough for children to use safely, likely with appropriate supervision.
- The leather used for the exterior is environmentally friendly, aligning with sustainability efforts.
- All collected user data is handled using the best safety practices worldwide, as indicated by the team.

Scalability of the Innovation

Integrating AI, computer vision, and gamification elements into a physical fitness product like a boxing bag presents opportunities for scalability.

As technology advances, the bag's tracking capabilities and interactive features could potentially evolve, and the gamification aspects could expand to include more features for a larger community.

Market Impact & Future Outlook

The BHOUT Bag was explicitly designed to fulfil combat sports experts' needs and provide beginners with the safest experience. BHOUT has the potential to inspire many people who find traditional fitness routines boring to enjoy an immersive experience with technology at its core.

As BHOUT scales and grows, BHOUT could inspire other fitness equipment manufacturers to incorporate similar technologies and gamification elements into their products, leading to broader adoption of smart, interactive fitness solutions, which they have applied for patent rights. The gamification aspects and the ability to compete with others create a new "fitness gaming" or "exergaming" segment, attracting a broader audience to engage in physical activities.

BHOUT has a promising future outlook as AI, computer vision, and sensor technologies advance, the BHOUT Bag's tracking and analysis capabilities could become more sophisticated, providing more detailed feedback and personalised training experiences for users and their community. The gamification elements could expand, potentially creating a more extensive ecosystem or community around the BHOUT platform. Also, integrating virtual and augmented reality technologies could further enhance the immersive nature of the BHOUT experience, blurring the lines between physical and digital fitness.

Societal & Environmental Impact

The BHOUT team envisions a world where they can gamify everyone's killer instinct. We want to challenge users to care for their health while doing things they enjoy actively. They want to turn fitness technology around and base it on what users really want.

- By introducing a gamified and interactive fitness approach, BHOUT makes physical exercise more engaging and appealing to individuals who may have previously found traditional workouts boring or unappealing.
- The ability to track progress, compete with others, and earn virtual rewards could provide additional motivation and incentives to maintain an active lifestyle, contributing to overall societal health and well-being.
- BHOUT's focus on providing an immersive and personalized training experience could improve adherence to exercise routines, leading to better overall health outcomes for users.

The exterior of the BHOUT Bag is made from environmentally friendly leather, suggesting that the company has considered sustainability in its product design and manufacturing processes. BHOUT likely sources its leather and other materials from eco-friendly suppliers throughout the leather production cycle. By choosing environmentally friendly leather, BHOUT is reducing its product's ecological footprint and supporting the growth of a more sustainable leather industry. This decision aligns with the growing consumer demand for eco-conscious products and showcases BHOUT's commitment to environmental stewardship.

Looking ahead, BHOUT's potential societal impact could extend beyond individual health benefits. BHOUT's gamified approach to fitness could inspire a cultural shift, making physical activity more appealing and accessible to a broader audience.

Additionally, as BHOUT continues to grow and expand its operations, it can further integrate sustainable practices throughout its entire value chain, from material sourcing and manufacturing to product distribution and end-of-life management. By prioritizing sustainability at every stage, BHOUT can minimize its environmental impact and contribute to developing a more eco-friendly fitness industry.

Potential Funding & Partnership Opportunities

Given BHOUT's innovative approach to combining fitness, technology, and gamification, the company may attract interest from various investors focused on the wellness, fitness, and gaming industries. Here are some potential funding opportunities and investors that BHOUT could explore:

Venture Capital. BHOUT's innovative combination of hardware, AI, and gamification elements could attract interest from venture capital firms that invest in emerging technologies, fitness tech, and gaming/esports startups.

- Lerer Hippeau - Invests in consumer, enterprise, and frontier tech startups, including fitness and wellness companies.
- Passion Capital - Invests in early-stage companies in various sectors, including fitness, health, and gaming.
- Fitt Capital - Specialises in investing in fitness, health, and wellness startups.

Corporate Investors. Established fitness equipment manufacturers or gaming companies might be interested in investing in BHOUT as a strategic move to gain a foothold in the emerging smart fitness equipment market.

BHOUT can attract potential investors from *Angel Investors, Syndicates and Accelerators* such as Techstars Sports Accelerator and GameFounders

Furthermore, BHOUT has been focusing on expanding partnerships worldwide with the best tech, fitness, and health providers to build the most groundbreaking BHOUT experience possible. BHOUT can explore the following partnerships to expand its reach and collaborate for mutual benefit.

- **Technology Partnerships.**

BHOUT could collaborate with companies specialising in AI, computer vision, sensors, or gaming technologies to enhance their product's capabilities and stay ahead of the curve.

- **Gaming and Esports Collaborations.**

Forming partnerships with other gaming companies, esports organisations, or influencers in the gaming community could help BHOUT tap into the growing esports market and attract a younger, tech-savvy audience.

- **Health and Wellness Partnerships.**

Collaborating with health-focused organisations or corporate wellness programs could position the BHOUT Bag as a valuable tool for promoting physical activity and preventive healthcare.

- **Smart Home Technology Integrations**

Exploring partnerships with smart home technology providers could allow seamless integration of the BHOUT Bag into connected home ecosystems, enhancing the overall user experience.

By leveraging these potential funding and partnership opportunities, BHOUT could secure more funding, necessary resources, expertise, and collaborations to accelerate its growth, expand its market reach, and solidify its position as a leader in the emerging smart fitness equipment and gaming industry.

Potential Roadblocks & Risks

- **Regulatory Challenges.** As the BHOUT Bag incorporates AI, computer vision, and other advanced technologies, the company may face regulatory hurdles regarding data privacy, user safety, and product certification in various markets.

- Engaging legal experts and regulatory consultants early to ensure compliance with relevant laws and regulations in new markets will mitigate this risk.

- **User Adoption and Engagement hurdle.** Despite BHOUT's innovative concept, users may still need to embrace the gamified approach to fitness or find the BHOUT Bag compelling enough to adopt over traditional fitness equipment which they are used to.
 - BHOUT is actively conducting extensive user research and testing to refine the user experience and gamification elements. Raising awareness of the uniqueness of BHOUT Bag can improve user adoption and engagement. Incentives or rewards could also be offered to encourage long-term user retention.
- **Competition and Market Saturation.** As the concept gains traction, competitors may emerge with similar or improved offerings, leading to market saturation and intense competition.
 - BHOUT is encouraged to innovate and continuously differentiate its product offerings. It should also leverage intellectual property protection strategies, such as patents, to safeguard proprietary technologies, foster a strong brand identity, and cultivate a loyal customer base.
- **Scalability and Manufacturing Challenges.** As demand increases, BHOUT may face challenges in scaling up production and maintaining consistent quality and performance across units.
 - BHOUT can develop a robust supply chain and manufacturing processes early on by establishing partnerships with reliable suppliers and manufacturers. To streamline production, BHOUT should implement rigorous quality control measures and consider automation or modular design approaches.
- **Cybersecurity and Data Privacy Risks.** As a connected device handling user data, the BHOUT Bag and its associated software (app) may be susceptible to cybersecurity threats and data breaches.
 - BHOUT has implemented industry-standard security measures. Developing robust data privacy policies and obtaining necessary certifications will further improve existing security features.

Conclusion

BHOUT's innovation in creating the world's first AI-powered boxing bag represents a groundbreaking convergence of fitness equipment, cutting-edge technology, and gamification elements. By seamlessly integrating artificial intelligence, computer vision, and sensor technology into a traditional fitness product, BHOUT has redefined what can be achieved in interactive and personalised training experiences.

The BHOUT Bag's ability to track and analyse every strike, provide real-time feedback on technique, and adapt to individual performance levels sets a new standard for fitness equipment. Moreover, gamification, such as creating personalised routines, competing with others, earning virtual rewards, and building avatars, can potentially revolutionise how people perceive and engage with physical exercise.

BHOUT's innovation extends beyond gaming fitness equipment; it represents a paradigm shift in how technology can be leveraged to make traditionally monotonous activities more engaging, enjoyable, and accessible to a broader audience. By blurring the lines between fitness and gaming, BHOUT can attract a new generation of users who may have previously found traditional exercise routines unappealing.

Innovation In View

How **BHOUT** brings innovation to life



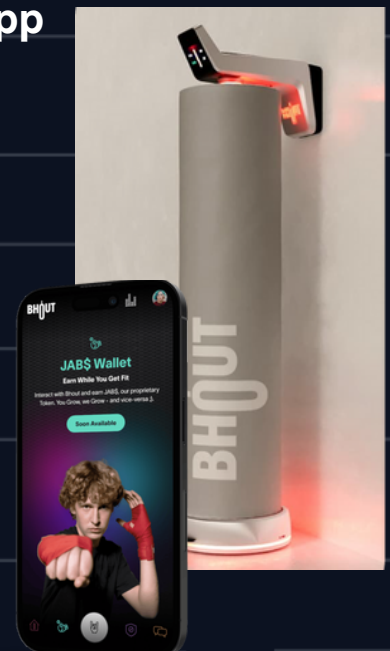
AI-enabled, gamified boxing bag

- The BHOUT Bag has an integrated AI processing unit that connects all the sensors and enables advanced capabilities with computer vision tracking.
- Multiple sensors are embedded throughout the bag's surface, allowing it to detect and measure the power or force behind each strike landed on the bag, enabling progress tracking and strength analysis.
- The bag's multi-layered design mimics the density of human body tissues, providing a realistic and safe striking experience.
- The bag has a wall mount or self-stand, guaranteeing the best and safest experience. It can also be rotated 180 degrees to expose anchor points for attaching elastic resistance bands, enabling users to incorporate strength training exercises into their workout routines.

AI-Powered eSports Ecosystem: The BHOUT App and Bag's Intelligent Collaboration

The BHOUT's software and app are crucial in delivering an immersive experience for BHOUT users.

- Users track their activities and performance through the app's dashboard.
- Users can create personalized routines within the app, tailoring their workout experiences to their preferences and fitness goals.
- Users can compete with others, track their progress, and compare their performance on leaderboards, creating a sense of friendly competition and motivation within the community.
- Users can build and customize their avatars within the app, creating a unique digital representation of themselves and fostering a sense of identity within the BHOUT community.
- The app introduces a virtual currency system called JAB\$, which users can earn by completing workouts and achieving milestones, gamifying the fitness experience.



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 Innovation Scouts identify 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 Innovation Scouts interview founders and tech executives to publish innovation memos and create a comprehensive company profile on our public online platform.



Introductions to strategic opportunities

Our Innovation Scouts share 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

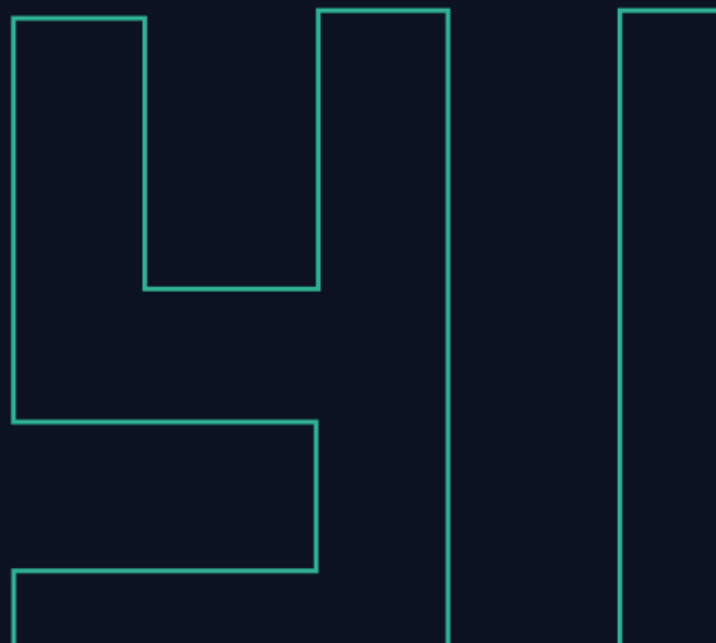
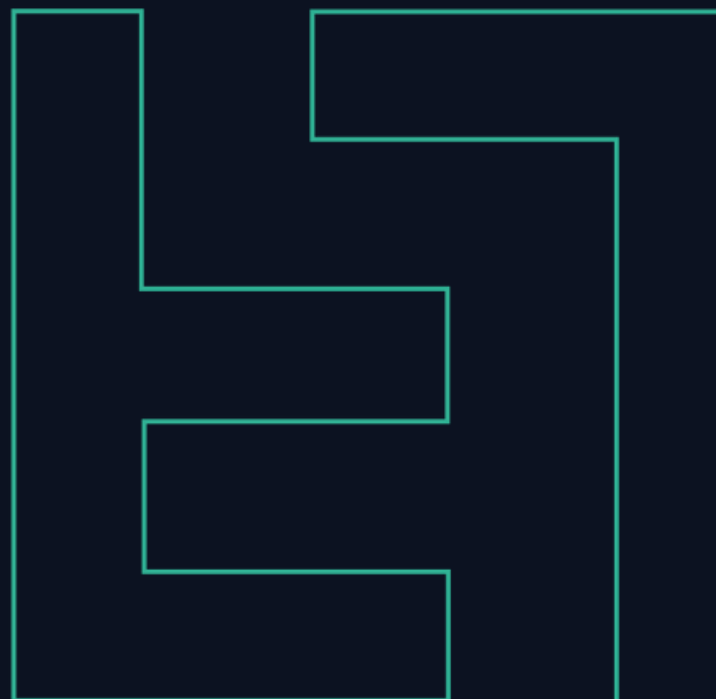
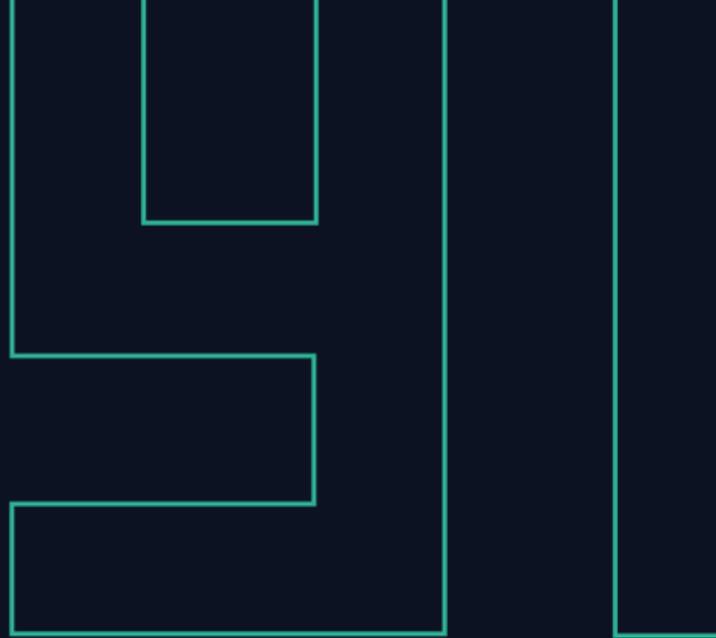
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Sand Technologies, a global technology services company with presence across Silicon Valley, France, the UK, Romania, and several emerging markets, is at the forefront of supporting scale-ups worldwide in overcoming the challenges of rapid growth. 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

The FutureList



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