



InsideTracker



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Company Profile

InsideTracker was founded in 2009 by leading scientists in aging, genetics and biometric data from MIT, Tufts and Harvard. Its mission is two-fold: first, to offer its users a clearer picture (than they've ever had before) of what's going on inside their bodies and then to provide them with concrete, personalised, trackable action plans for living a longer, healthier life.

“InsideTracker is a truly personalized nutrition and performance system. Our mission is to help people add years to their lives and life to their years by optimizing their bodies from the inside out”.

The idea for InsideTracker can be traced back to a childhood experience of its founder, Gil Blander. When Gil was a young boy, he lost someone close to him, his aunt. Gil was only 12 at the time, but her passing left a permanent mark. “I never thought about death before. I thought everybody lived forever. I was so sad about my aunt and so sad for myself, too. Why couldn't life go on forever? Why did it have to end?” This event was the spark that led to Gil's lifelong passion and pursuit of the answer to how to delay the onset of age-related diseases and increase lifespan. “I see the human body as a machine,” says Dr Blander. “Fine-tuning it will not only allow it to perform better now, but also to perform longer into the future.”



This early passion for longevity has driven Dr Blander throughout his career and ultimately led to the idea that spawned InsideTracker. During his time at computational systems biology company Genstruct, he conducted extensive research into drugs that mimic the effects of caloric restriction and concluded that nutrition had much greater potential for delivering results than drugs. Through his work at the Weizmann Institute of Science and MIT, Dr Blander is now recognised worldwide for his research in the biology of aging and translating research discoveries into new ways of detecting and preventing age-related conditions.

Flagship Product Deep Dive

InsideTracker

InsideTracker's mission is to help people realise their potential for long, healthy, productive lives by optimising their bodies from the inside out. InsideTracker's proprietary algorithm analyses its users' biomarker and physiomechanical data to provide a clear picture of what's going on inside them. Based on this analysis, InsideTracker offers its users ultra-personalised, science-based recommendations for positive changes to their nutrition, supplementation, exercise and lifestyle, along with a plan of action to track their progress toward their goals.

InsideTracker's team of scientists, bioinformaticians and technologists built a powerful engine called SegterraR that mines and visualises data. Leveraging the power of complex computer programming, SegterraR can mine vast amounts of biometric and scientific data, preparing it for use by InsideTracker's automated algorithmic engine, SegterraX.

SegterraX, is a patent-pending, automated algorithmic engine that runs the InsideTracker platform. It generates ultra-personalised interventions for each end user by integrating the full range of user inputs (biochemistry, demographics, profile, habits, genetics) with rules developed by InsideTracker scientists based on their analysis of over 2,500 peer-reviewed scientific publications, a demographic database of over 180,000 healthy individuals, a database of over 8,000 unique foods and the 200+ combined years of scientific experience across its team and scientific advisory board. SegterraX is continuously refined, drawing on cutting-edge research and technological advances.

To insert their biomarkers for analysis, users can either order their blood and DNA tests from the company's web site or upload their results from recent tests by a third-party. They then fill out an online questionnaire to provide additional information relating to their nutrition, habits and lifestyle. All this data, including up to 45 key blood biomarkers, is then analysed using SegterraX and results in a detailed action plan delivered via the web site and a mobile app. The mobile app also allows integration with real time physiomechanical data from the end users fitness tracker, such as a Fitbit or Garmin. Combined with the blood and DNA biomarker data, this gives end users an exponential level of precision and customisation to their action plan.



“When it comes to understanding what is going on inside your body, blood + DNA is a powerful one-two punch. Your blood data is dynamic, changing over time with various inputs – from your environmental exposure and dietary choices to your sleep and stress levels. Your DNA is hard-coded into each cell and may provide a high-level picture of your body’s genetic potential – that is, how you might be predisposed to respond to certain inputs, like food, sleep, exercise and stress. Taken together, your blood and DNA can help steer personalised guidance generated by the InsideTracker platform to ensure it is as accurate as possible and giving you an advantage in reaching your wellness goals.”

The product contains a lot of personal data, which InsideTracker takes seriously. The company is HIPAA compliant, and even with 10 years in business with the handling of thousands of DNA and blood tests, the company’s reputation remains untarnished. “Security and vigilance do not stop. We have implemented best practices for security and are continuously improving them to meet the highest industry standards.”

Efficacy of product

A 2018 paper in Nature’s Scientific Reports journal demonstrated the validity of InsideTracker’s approach to using blood biomarkers to develop customised intervention strategies.

The population (1032 across a broad age range) was apparently healthy individuals that used Inside tracker and received at least two blood tests. Each individual was presented with a variety of interventions relating to food, supplements and lifestyle, that were generated based on the end users baseline biomarkers and using the broad scientific literature base generated through SegterraX.

To understand whether there were improvements in biomarkers, the longitudinal changes for individuals whose baselines values were out of the clinically acceptable range were assessed. There were notable improvements in most of the biomarkers analysed. However, as this was an observational analysis, one cannot establish the causality of platform use on biomarker changes or resolve which component of the intervention may have been related to the results. Overall, the study used a rich longitudinal dataset of clinical biomarkers to uncover novel biological relationship whilst validating known ones. It also demonstrated that InsideTracker is associated with improvements in health parameters.

Product Development

While he was sure that InsideTracker was realising its mission and people to live a longer, healthier life, Dr Blander, a self-described “longevity freak”, wanted to be sure. Working on this challenge with David Sinclair and Leonard Guarente led to the development in 2015 of InnerAge – a measure of biological age. Having collected a wealth of data from its predominantly healthy users, the company released InnerAge 2.0, which now incorporates 14 biomarkers for women and 18 biomarkers for men that are closely correlated with age.

InnerAge 2.0 is a new and improved ultra-personalised nutrition system focused on optimising the end users healthspan. InnerAge 2.0’s advanced data-driven model first calculates biological age, then provides an action plan of science-backed recommendations with the goal of improving the quantity and quality of the years ahead of you.



Target market

People want to take charge of their health and wellness. Biased, misleading, impersonal information creates doubt and confusion obscuring their way forward. As a result, they lack three important things to help them get a clear picture of what their bodies look like on the inside, a clear measure of whether their diet and exercise choices are helping or hurting and clear idea of who or what to trust when it comes to health, wellness and performance guidance.

This is exactly what InsideTracker has been designed to solve. InsideTracker is a platform for people of any age to optimise their health goals.

Success Factors

Team and Reputation

Gil Blander, founder and Chief Scientific Officer, is internationally recognised for his research in the basic biology of aging and translating research discoveries into new ways of detecting and preventing age-related conditions. He leads the team of biology, nutrition and exercise physiology experts and computer scientists at InsideTracker and has been featured in CNN Money, The New York Times, Forbes, Financial Times, The Boston Globe.

Ram Mester, Executive Chairman, has over 25 years of experience building tech companies and leading executive teams. As CEO, he led Guardium from start-up to a dominance position in the database security market and its acquisition by IBM. As co-founder and CEO at Telekol, he led its growth from start-up to top supplier of enterprise grade intelligent communications systems and its acquisition by Nokia. Additional past and present engagements include executive management, advisory and board roles with technology start-ups in security, cloud computing, database software and SaaS based e-commerce and behavioural analytics.

InsideTracker's scientific advisory board has over 200+ years of combined experience and includes David Sinclair, Lenny Guarente, Jeffery B. Blumberg and David Katz.