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# LifeTracker

*Never lose anything again*

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## Product Description

LifeTracker is a tagging system for frequent travelers to locate and track their personal belongings anywhere, anytime from their cell phones or the LifeTracker website.

Each LifeTracker tag is a small, lightweight and ultra-low power electronic sticker. It can last for years without battery replacement and can be attached to most items that travelers care about.

With a Google Map-based interface and real-time processing service, customers can easily locate and track where their personal belongings are, and have been. The LifeTracker service empowers customers to define item boundaries as well as traveling routes in order to be alerted as soon as their personal belongings go to an unexpected place or travel on a wrong route. This service will protect consumers from ever losing anything again.

Life Tracker will offer two possible service plans for customers in the initial stage:

- **Subscription:** Customers pay a fixed monthly fee for the tracking service
- **Pay-Per-Track:** Customer pay based on the time duration of the tracking period

The price of the service plans will depend on the number of tags tracked. The more tags a customer has, the cheaper the service fee per tag will be.

## Technology

LifeTracker technology will leverage existing mobile and wireless technology infrastructures in order to track tagged belongings. Modern submicron-CMOS and heterostructure semiconductors make ultra low-power operation possible for even large scale integration systems. To circumvent the need for on-tag batteries, the LifeTracker tags will exploit the ubiquity of Wi-Fi access points and mobile basestations, coupled with an RFID-based architecture, to harvest radio-frequency energy from its environment. LifeTracker tags operate in low radio frequency, and thus are perfectly safe to use.

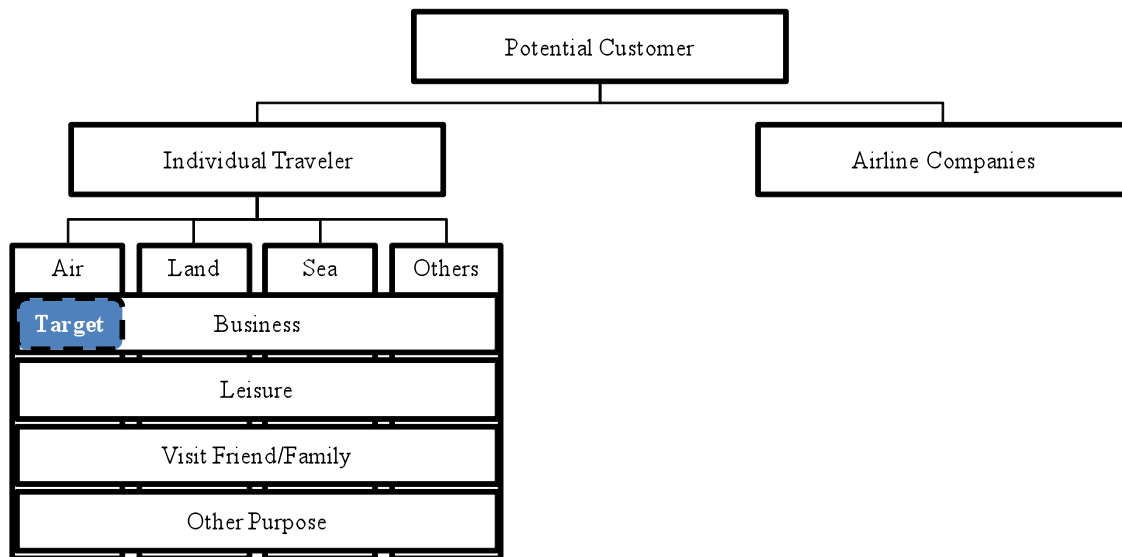
Depending on the user-type and/or the subscription-service, the LifeTracker is aimed to function locally, nationwide, and worldwide. A user may activate a tag by submitting a query using a registered account through the LifeTracker website or via the LifeTracker mobile application that may be installed on one's mobile phone. The query will periodically "call" the tag and triangulate its position for path and location tracking.

## Market Overview

For many travelers, managing baggage is a top priority. For example, over 60% of air travelers surveyed globally associated a pleasant trip with having their “check-in baggage arrive promptly and safely”; a score second only to flights being on time – and well ahead of short queues, friendly ground staff or well-equipped modern terminals.<sup>1</sup> Last year, according to the WorldTracer database and SITA, 14.28 bags per thousand passengers were mishandled worldwide, costing airline companies \$2.5B a year. Being that passengers bear the burden of these inefficiencies, we estimate an even larger opportunity in the consumer segment.

Our plan is to approach frequent business air travelers as our initial market segment (see Exhibit 1). We believe that this type of traveler has a higher motivation to use our product as well as a higher willingness to pay for the product. Once we successfully target our initial segment, we can expand to any travelers who is concerned about losing items.

Exhibit 1: Hierarchy of Market for Traveler



## Market Size and Growth:

In 2008, there were 1.99 billion person-trips in domestic travel in the U.S.. Among them, 12% were business/convention travelers and 16% were air travelers. That is, there were 38.2 million person-trips engaged in business in the U.S. air travel industry. Assuming the average business air traveler flies once bi-monthly, there are about 6.4 millions business domestic air travelers in the U.S. that could benefit from this service.

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<sup>1</sup> Baggage report 2009, SITA (Specialists in air transport communications and IT solutions)

The LifeTracker market is tied to the amount of travel that occurs, which is in turn dependant on the U.S. and world economy. Despite the financial crises, however, the travel industry experienced a decline in the person-trips last year of less than 1%, which shows the resilience of the market. In the long term, we expect the travel and tourism market to grow at 2-4% a year.

### Competition

Our primary competition is the travel insurance industry. Companies such as Travel Guard, Travelex, and American Express offer insurance services that aim to address the same pain point LifeTracker is aiming at: that consumers are concerned about losing an item they care about during their trips. LifeTracker is superior to its competitors in three important ways:

1. Insurance provides consumers with a reimbursement representing the *cost to replace* the lost item, which often has little association with the consumer's value of that item. Add in the inconvenience of filing a claim, and the wait to receive the reimbursement, and much of the consumer's pain-point is left unaddressed.
2. Insurance does not decrease the number of items lost, it merely attempts to compensate for the inconvenience. The industry actually exacerbates the problem due to moral hazard. The LifeTracker service gets to the root of the problem by preventing items from getting lost in the first place.
3. LifeTracker puts the power in the hands of the consumer by allowing them to track what they care about directly rather than by depending on the fine print in insurance contracts to guarantee compensation for their losses.

There are a limited number of products that use tracking technology to address this consumer need (such as Apple's "Find My iPhone" feature and the security protection built into some laptops), but they are generally offered as complements to specific, track-able items. Due to their specificity, these solutions pose little a threat to LifeTracker.

### LifeTracker Team

**Frances Tsung** is a 2010 MBA student at MIT Sloan. Frances received her Bachelor and Masters degree in Electrical Engineering. Before Sloan, Frances worked in OmniVision, a lead sensor chip provider located in Santa Clara, California as a product engineer in charge of the production of seven sensor products. During Sloan, Frances focused on strategy and marketing.

**Kittipong Techapanichgul** is a 2009 SDM candidate, currently studying under the System Design and Management (SDM) program at MIT. Before joining the SDM program, Kit worked at ExxonMobil as a business-line application analyst providing global software testing services and application support for two and half years. Formerly, he worked as a web application developer and Java programmer. He also received a Master degree in Information Science in 2005 and a Bachelor degree in Computer Science in 2002.

**Saleem Hussain** is a 2010 MBA candidate at the MIT Sloan School. Prior to starting business school, Saleem worked at IBM for five years, as a consultant within the services practice, and as an engineer in the company's Information-Based Medicine group. He also spent one year studying the healthcare delivery system in rural Ghana. Saleem graduated with high distinction from Duke University, where he earned a triple major in biomedical and electrical engineering and computer science.

**SunJoo Park** is a 2010 MBA candidate at the MIT Sloan School. Prior to MIT Sloan, SunJoo worked as a business consultant at Booz Allen Hamilton (a global strategy consulting firm) in Seoul, Korea. Her focus during Sloan is marketing/strategy development in consumer goods/healthcare industry. SunJoo received her B.A degree in economics at Seoul National University.

**William Sanchez** is a Ph.D candidate in Electrical Engineering and Computer Science at MIT. His research interests are in the design of energy-efficient, low-power circuits and systems for wireless communications and biomedical applications. Prior to his graduate work, William worked as a Graduate Fellow Weapons Analyst at the CIA from 2005 to 2006 (Washington, D.C.). In 2007, he spent 3 months at Telefonica R&D (Madrid, Spain) working as a software architect. William completed his B.S.EE and M.Eng degrees at MIT in 2005 and 2007, respectively.