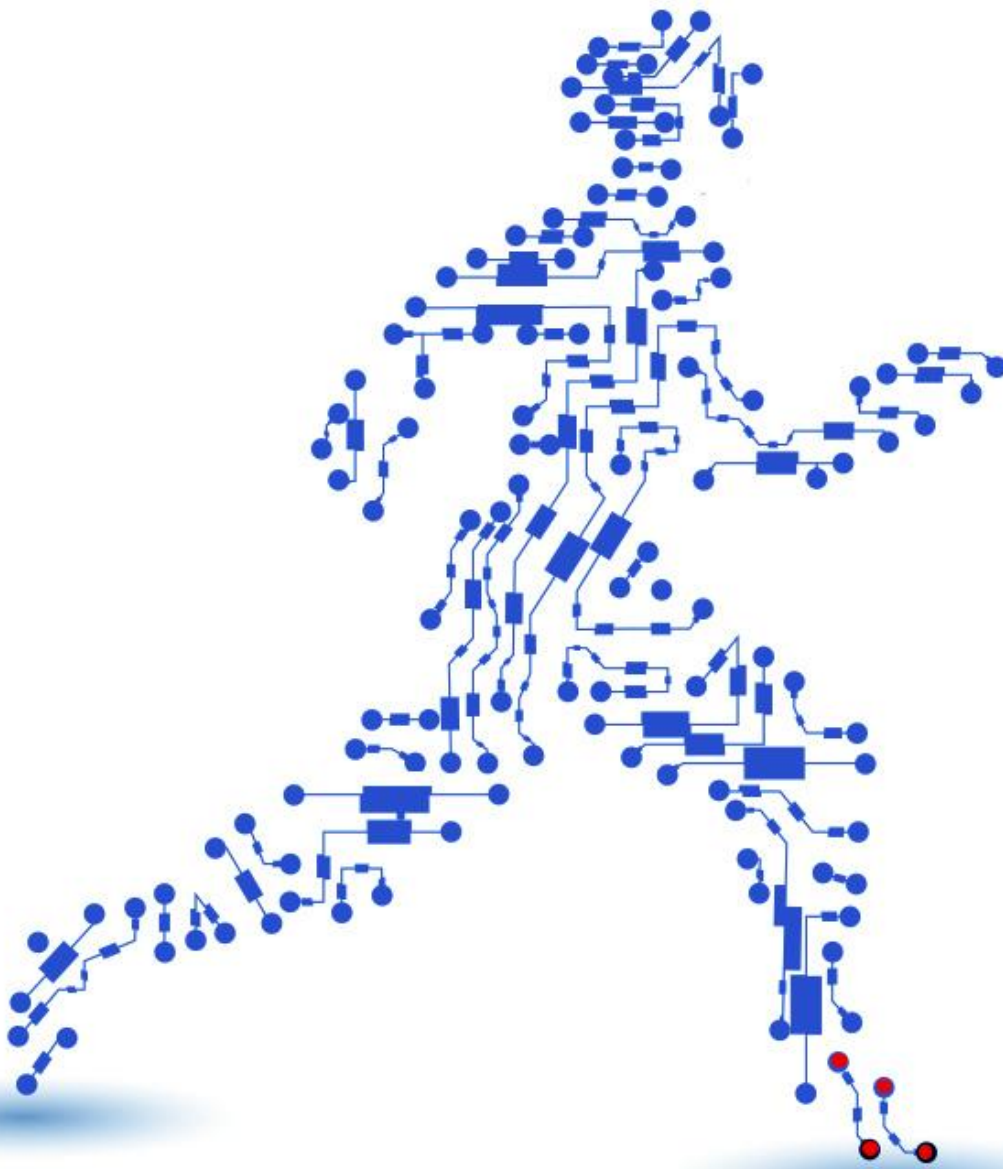


Mobile Sensing

Sports & Fitness



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Executive Summary

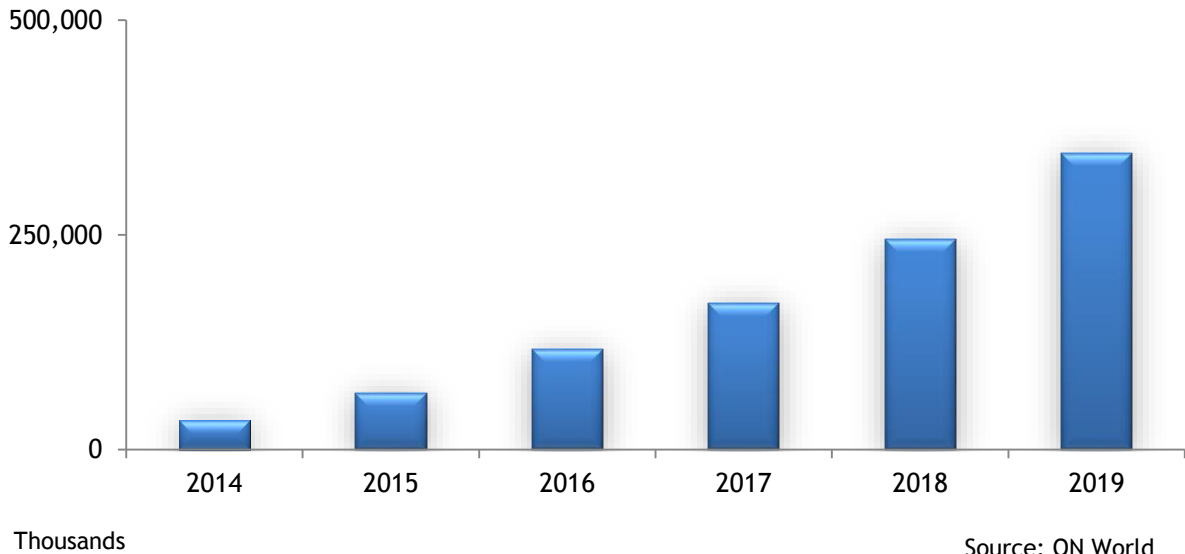
Mobile sensing sports and fitness will be a \$10.5 billion market in 2015, tripling in size from last year. With over \$1 billion in venture funding, 600+ products and growing offerings from the mobile/IT industry, the beginning of a multi-year mobile sensing investment story is underway.

Bluetooth Smart has connected millions of ultra-low power wireless wearable sensors to the Internet and hundreds of millions of sensor infused smartphone/tablets are providing app developers with new markets and partners. This opportunity will continue to grow at a staggering pace with shipments of mobile sensing devices that support sports and fitness apps increasing by 1000% over the next five years.

In 2014, activity trackers outsold general purpose smartwatches four to one. However, this market is undergoing a fundamental change due to the introduction of smartwatches. Over 5 million smartwatches shipped in 2014 that support sports and fitness apps and almost half were fitness-dedicated activity tracker/smartwatch hybrids. In five years, general purpose smartwatches that support fitness apps will make up over 70% of the smartwatch market.

By the end of 2019, 1 billion mobile sensing devices that support sports and fitness will have been shipped worldwide.

Figure 1: Global Total Mobile Sensing Sports & Fitness Device Shipments (2014-2019)

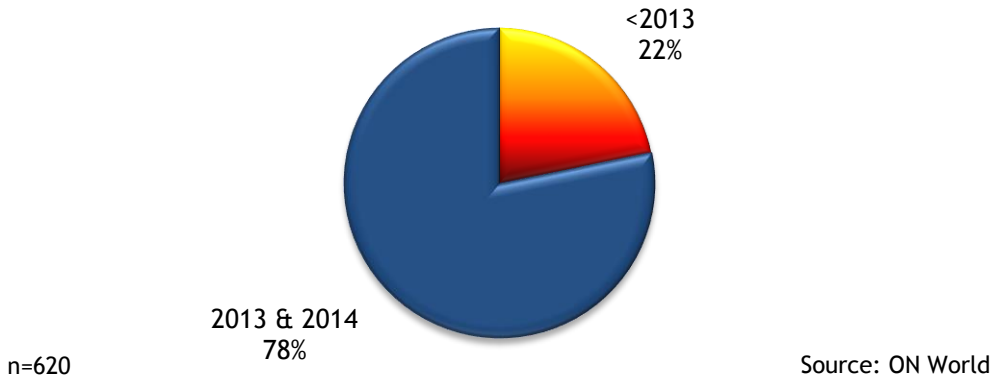




Sensor-Fused, Cloud Connected Wearables

Further illustrating the mobile sensing market growth is the product review trends. Out of the 75,000 product reviews for the 620 sports and fitness products that we evaluated 350% more end user product reviews were completed in the last two years (2013 and 2014) compared with all of the previous years.

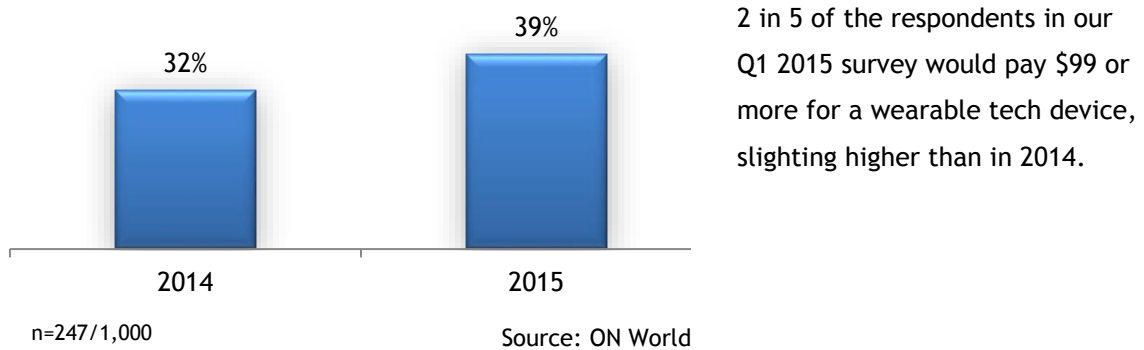
Figure 2: Mobile Sensing Sports & Fitness Devices Product Reviews <2013 & 2013+



Health & Fitness Continues to Drive Adoption

ON World’s Q1 2015 survey with 1,000 U.S. consumers found that 35% are interested in buying at least one wearable tech product. Since our previous survey in 2014, interest in activity trackers increased to 39% from 32% for respondents likely to adopt wearable technologies which is nearly as high as interest in smartwatches at 44%.

Figure 3: Rising Interest in Activity Trackers





Competitive Forces

Bluetooth Smart has enabled standards based wireless wearable sensors to communicate seamlessly with hundreds of millions of smartphones and tablets. In this report we analyzed over 250 companies that currently offer over 600 mobile sensing sports and fitness products. In 2014, the top three vendors had 78% of the activity tracker market share. Fitness-focused products by Basis, Fitbit, Misfit, Garmin, Microsoft, Polar, Samsung and Withings increased by >500% in 2014.

However, the landscape is changing and in 2015 there will be millions of general purpose smartwatches shipping that include activity tracking sensors and sports and fitness apps. Sales of smartwatches with integrated sensors to support health and fitness apps increased 256% between 2013 and 2014. Today, dedicated activity tracking is the largest product segment, making up over half of mobile sensing fitness equipment revenues. In five years, this ratio will reverse with general purpose smartwatches making up three-quarters of the revenues and activity trackers about 20%.

Disruptors & Innovators

Our analysis of companies offering wearable sensors found that as of December 2014, they have raised over \$1.3 billion in equity/venture funding and 42% offer solutions for sports and fitness including Basis, Jawbone, Fitbit, Misfit and Pebble.

Sports and fitness innovators are also entering general wellness and healthcare markets as illustrated by BodyMedia's extensive intellectual property on multi-sensor fusion for wearables, Zephyr Technology sensor-enabled clothing (acquired by Covidien who was then acquired by Medtronic) as well as wrist-worn continuous EKG heart rate monitoring technology by Basis, Mio Global and Valencell.

Health and fitness startups with wearable technologies and/or other mobile sensing solutions have raised over \$40 million from crowd-funding alone. Some of the fitness-related startups with the largest funding have their roots in crowd-funding including Misfit and Pebble that have together raised over \$100 million.

Based on an extensive analysis of 250 vendors offering 600 products, 75,000 product reviews and ON World's 2015 survey of 2,000+ consumers, this report covers the dynamic and rapidly growing market for mobile sensing sports and fitness devices, their respective mobile apps and developer platforms.



Report Scope & Methodology

Based on input from 2,000+ individuals and an evaluation of over 600 products, this report provides in-depth analysis, forecasts and primary research on the market opportunities for mobile sensing sports and fitness devices with built-in communication systems and associated apps/software.

Our research methodology consists of the following:

- **Primary Research:** Interviews/surveys with 2,000 U.S. consumers in Q1-Q2 2015.
- **Investigation:** Analysis of 600 products and 75,000 product reviews; evaluation of company, technology/financial reports and public/private databases.
- **Product Segments:** Activity trackers, Smartwatches, Heart Rate Monitors, Speed/Cadence Sensors, Sports watches and other Performance Monitors.
- **Technology Evaluation:** Analysis of relevant standards, user requirements and competing alternatives including Bluetooth Smart, WiFi, ZigBee, ANT, NFC and others.
- **Competitive Landscape:** Analysis of 50+ companies across the whole value chain.
- **Market Size Projections:** Our market size forecasts are based on all of the above and is then applied to our proprietary data modeling methodology.

Mobile Sensing Definition & Variations

“Mobile sensing” is an ecosystem that consists of mobile sensing devices such as smartphones, tablets, smartwatches and other wireless wearables along with their sensor technologies and software applications.

The primary mobile sensing variations for sports and fitness are general purpose smartwatches, activity tracker/smartwatch hybrids and dedicated sports and fitness wearables.

Mobile Sensing Devices:

Smartphones/tablets, smartwatches and other wireless wearable sensors.

There are hundreds of millions of smartphones/tablets using health and fitness apps that use built in sensors without requiring any additional devices. In this report, we analyze and forecast the mobile sensing device segments that are having the biggest impact on sports and fitness with particular focus on smartwatches and activity trackers.



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ON World provides global business intelligence on smart technology markets. Founded in 1996 in the San Francisco Bay Area, ON World is headquartered in San Diego, California.

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