Pedometer Use Case for the Piezoelectric embedded system for shoes.

* The customers of such a product would be average people who are concerned about their health and wish to keep track of their physical activity using simple devices. The most obvious and simplest thing to track is the number of steps taken.
* In 2016 alone approximately 55 million ‘fitness trackers’ were sold worldwide, and by 2022 it is estimated to increase to 105 million.

<https://www.statista.com/topics/2595/fitbit/>

The size of the market for our pedometer product is in the tens of millions and only likely to increase.

Money wise the company Fitbit alone reports a revenue of $1.616 billion dollars in 2017 meaning the market size to be in the billions.

<https://investor.fitbit.com/press/press-releases/press-release-details/2018/Fitbit-Reports-571M-Q417-and-1616B-FY17-Revenue/default.aspx>

<https://www.statista.com/topics/4393/fitness-and-activity-tracker/>

* Products like this, would be other pedometers/fitness trackers such as: Fitbit, Samsung Gear, Garmin Vivosmart, there are many fitness tracking brands/products out there.
* Current Pedometers are either inaccurate (count of around 40 steps off on average over 400m walk) or do nothing but count steps.

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5214549/>

Current fitness trackers are bad at measuring calories burned.

<https://med.stanford.edu/news/all-news/2017/05/fitness-trackers-accurately-measure-heart-rate-but-not-calories-burned.html>

[https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5488109/#CR4](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5488109/%23CR4)

Step Counting: A Review of Measurement Considerations and Health-Related Applications

This article talks all out about step counters. Gives an overview of different kinds currently on market: waist-worn/ankle/wrist etc. and tendencies for errors. Talks about what a ‘step’ is, and how many steps per day relates to health. Also on the potential to integrate step counting in medical practice.