

What is the title of your vision statement?

Walk Toward a Healthy Life

What is your name?

Eric Rouse

What is your ONID username?

rousee

What world problem are you concerned about?

Typical office work of our time is quite sedentary. For the modern worker, most work hours are spent in relative inactivity. Also, most of the "awake time" for an average employed person is spent at work, 8.8 hours on average, while 2.6 hours are spent on leisure and sports activities. [1]

Also, at least in the United States, "only 12 percent of people use active means to get around, and the obesity rate is 33 percent, according to "Wired" magazine's report on the findings of University of Tennessee researcher David Bassett and Rutgers University researcher John Puche." [2], [3]

So, we sit at work, we sit on our way to and from work. This doesn't even begin to address inactive leisure.

All the sitting around is also having an effect on children. According to the Centers for Disease Control and Prevention, childhood obesity has more than doubled in children and quadrupled in adolescents. [6]

What's an answer to this concern? *More walking.*

Walking is one of the best kinds of exercise [4], and an excellent leisure activity[5].

According to a study in Copenhagen, reduction in movement (from 10,000 steps a day to 2,000) correlates with an increase in abdominal fat and heart disease risk factors. [7] A different study, performed in South Carolina showed that men who spent 23 hours per week in sedentary activities had 64% greater chance of dying from heart disease than those who reported less than 11 hours a week of sedentary activity. [7]

More movement, more walking. Office work isn't going to change any time soon, so the worker needs to be proactive and create a culture of activity. At least one study shows that a "micro-break" every 15 minutes or so can reduce metabolic risk. [8]

What is one statistic or quote showing that this is a major problem? (Be sure to cite your source.)

According to the Centers for Disease Control and Prevention, more than one third of US adults are obese, inducing conditions such as heart disease,

diabetes, and certain types of cancer. It is the number one cause of preventable death. [9]

What is one anecdote about how this problem might possibly play out in real life for somebody?

This problem plays out in lives all around us, but I'll submit myself as an example.

I started my career as a Mechanical Engineer a number of years ago, I was 6'0" and approximately 200lbs for a BMI of 27.1, or, overweight. Slowly my sedentary life has contributed to significant weight increase. I'm now 242 lbs for a BMI of 33.2, which according to the NIH makes me obese. [11]

I've recently started trying to lose weight, but I spend the bulk of my time at work, in front of a computer, in a work culture of long uninterrupted work stretches. This makes me tired and uninterested in exercise, resulting in a damaging cycle.

Within this world problem, what is one sub problem that bothers you?

That small changes don't add up. An example is the "new year's resolution" mentality of making a monumental, life-altering change only to quit after a short period. In this case, the idea that one must join a gym and work out for hours every day to make any difference.

Large commitments of time and energy create a barrier for people who can't radically change their lives. Especially because work is so commonly sedentary, switching careers for health is an aggressive and difficult step.

What is one quote illustrating that this sub problem is important?

"...the single most common New Year's resolution is to lose weight. It also violates two of the top rules for creating effective resolutions. For starters, "losing weight" isn't very specific. It can be five pounds or fifty. It's also an admirable goal that actually encompasses a lot of little goals, which can be overwhelming. So, if you want to make it more feasible, try aiming for those instead." [12]

Taking 10,000 steps per day is enough to start seeing health benefits like a reduced waist line and stronger muscles and bones. [11]

What is one anecdote about how this sub problem might possibly play out in real life for somebody?

For me, weight loss and health in the past has meant setting unreasonable goals - (this will be easy, I'll lose two pounds a week by not eating and lifting weights for 3 hours a day!) - and giving up as they are not achieved.

What is a second anecdote about how this sub problem might possibly play out in real life?

Instead of increasing activity in a measured, careful way, an over-increase can

result in injury, which then leads to less activity.

What is one possible software system that could help to solve this problem?

A software package that consists of a step measuring component (like a pedometer, or the accelerometer of a smart phone) a timing component and a social networking component.

The software would provide a user with a number of options for tracking their activity levels as well as friendly and helpful guidelines and reminders for increasing them.

Also, the software would keep track of the time between activities and encourage the user to get up and walk around at regular intervals. A possible badge/reward system could keep users engaged and interested in staying on-track.

What are the three most important features that this helpful software system should have?

1. The software must have a timer to measure the time between activities.
2. The software should count steps.
3. The software could have a social networking feature to link the user with others who are trying to create a lifestyle of greater activity.

For the 1 st of these three features, why is this feature important?

The activity timer is the crux of the solution. We need to be reminded regularly to move around.

What is some sort of hypothetical example about how a person would use the 1 st feature?

A person would be absorbed in their work and get a reminder to get up and walk somewhere.

For the 2 nd of these three features, why is this feature important?

Counting steps is a relatively simple measurement of activity. Since over-complicating the process would probably result in user attrition, we'd want to make the counting/storing process as streamlined and friction-less as possible.

What is some sort of hypothetical example about how a person would use the 2 nd feature?

A user would set a goal of increasing their steps from whatever their baseline is (say 2000 per day) to 10,000 per day. The software would create a plan to increase by a certain number per day (say 500) and then measure and ensure the user made the increase.

For the 3 rd of these three features, why is this feature important?

People tend to stick to plans when accountability is involved. Also, healthier

habits need to become cultural. User success can be greatly improved by surrounding them with a group of people who want to increase their base-line activity level.

This network can be virtual, but if everyone in a workplace gets on board, activity can be increased together.

What is some sort of hypothetical example about how a person would use the 3rd feature?

A new user would recruit others from their office to all commit to a 10,000 step per day plan. They would be able to track and encourage each other on the way, perhaps even offer friendly competition.

Which of these three features is most important? Which is least important/optional? Why?

The most important feature is the timer. A reminder to get up, to move is probably the simplest way to guarantee an uptick in activity level.

How would you ensure that your system is economically viable?

Weight loss is big business, and the health care costs of obesity are staggering. Offering a useful, working method to people that helps them reduce their risk of obesity would likely be something they'd be willing to pay for. Also, businesses could be approached to offer it to their workers, as healthier employees cost less and are more productive. [13]

How would the world be a better place if the system was actually implemented?

Work culture and employee life would be redefined for the better. Money would be saved and quality of life would be improved.

What are your references? (On each line, put a bracketed number such as [4] and then the reference. It is a good idea to leave blank lines between the references.)

[1] <http://www.bls.gov/tus/charts/chart1.pdf>

[2] <http://www.wired.com/2008/12/surprise-people/>

[3] <http://www.livestrong.com/article/339349-why-did-obesity-increase-so-much-in-america/>

[4] <http://www.ramblers.org.uk/go-walking/advice-for-walkers/walking-and-your-health.aspx>

[5] https://en.wikipedia.org/wiki/Walk#A_leisure_activity

[6] <http://www.cdc.gov/HealthyYouth/obesity/facts.htm>

[7] <http://www.inc.com/articles/0502/Action-Tips-for-Healthy-Employees.html>

[8] <http://www.ncbi.nlm.nih.gov/pubmed/18252901>

[9] <http://www.cdc.gov/obesity/data/adult.html>

[10] <http://www.nhlbi.nih.gov/guidelines/obesity/BMI/bmicalc.htm>

[11] <http://www.thewalkingsite.com/10000steps.html> &&
<http://www.thewalkingsite.com/motivation.html>

[12] <http://lifehacker.com/the-new-years-resolutions-most-likely-to-fail-and-what-1491671137>

[13] <http://www.cdc.gov/workplacehealthpromotion/businesscase/benefits/productivity.html>