

Vision Statement Assignment

Overview

Your Vision Statement is a document describing a software system that you believe would improve our world. Your Vision Statement can focus on any major world problem that you like. Examples include pollution, poverty, terrorism, fascism, disease, natural disasters, racism, etc.

Your Vision Statement can describe any kind of system that you believe would help to solve some aspect of that problem. For example, if you decide to focus on poverty, you might propose a "web spider" system that sifts through millions of websites looking for the contact information of job training centers, then presents that information in a categorized fashion on a searchable map. (That way, poor people could use a web browser at a public library to look up job centers where they can get some training.)

You will not be graded on your Vision Statement. However, all the students will get to vote on which Vision Statements would be most interesting to use for class projects this term, and the authors of the most popular Vision Statements will receive extra credit and get to be the "customer" for a team who designs the envisioned system. Note that this means all vision statements will be publicly posted on a website. So only put stuff in the vision if it's ok for the world to read it.

You will never have to actually implement your proposed system. So dream big! But on the other hand, you need to imagine a system that probably could be built, if you had infinite time and money. So don't propose a system that works based on "magic." You need to have at least some idea of how the system might be constructed. Remember that if you propose a system that can't possibly be designed, then nobody is going to vote for your idea.

You actually will submit three Vision Statements this semester. The first version of your Vision Statement will be fairly short, 1–2 pages (single-spaced, 12 point Times Roman font, 1 inch margins). The second will be longer (2–3 pages), and it will either expand on your first Vision Statement, or it will be entirely new. The third will be still longer (3–4 pages), and it will either expand on one of your first two Vision Statements, or it will be entirely new.

See the schedule for due dates.

Your First Vision Statement Assignment

For your first Vision Statement, submit a PDF file that answers the following questions:

1. What world problem are you concerned about?
2. Why is this problem important?
3. What aspect of this problem seems particularly important to you?
4. How could a new software system help to solve this aspect of the problem?
5. Why do you think that this idea will make a big impact on the world?
6. What sources did you use in writing this Vision Statement?

See the example Vision Statement about homelessness below. It should give you an idea of what your Vision Statement should look like

The first version of the vision statement does not have to be perfect. In particular, this example Vision Statement has three problems that would be addressed in the second and third versions.

First, the initial Vision Statement does not need to back up all its ideas with compelling evidence. For instance, the first paragraph of the example Vision Statement above does not indicate how many people are homeless. Are we talking about thousands of people here or millions of people? Likewise, the last paragraph does not give any concrete evidence to back up the claim that people are generous. (Note, however, that you still need to cite sources in the last part of the document. Notice the little "[1]" symbol, indicating a reference to source number 1. Plagiarism is always wrong, even in the first version of your Vision Statement.)

Second, the initial Vision Statement can narrow pretty quickly to just one aspect of the problem without considering whether it is actually the most important aspect of the problem. The example statement above jumps from talking about homelessness to immediately focusing on providing materials to homeless shelters. How do we know that this is a more important part of the problem than, say, helping homeless people find shelters? Later versions of the Vision Statement will help to explain why you have chosen an important aspect of the problem.

Third, the initial Vision Statement can gloss over potential problems with the proposed system. For instance, the example above does not really explore the potential backlash that could be caused by spamming bloggers and homeless shelters with invitations to join the website. That's fine, as the second/third versions of the statement can address these problems. Keep in mind, though, that if you gloss over too many of these kinds of problems, then nobody is going to vote for your vision.

Appendix: Example Vision Statement

What world problem are you concerned about?

Homelessness is a significant problem in many nations where numerous people lack a permanent, safe place to spend their nights. Many of these people lack enough income to pay for housing. Some have drug addictions that prevent them from holding down a job, while others have simply come upon hard luck in the form of foreclosure or medical problems [1].

Why is this problem important?

Homelessness is a significant individual and societal problem for four reasons [2]. First, homeless people are at increased risk of getting ill from inclement weather or unsanitary conditions. Second, homeless people are at increased risk of physical harm from other people. Third, lack of a home makes it difficult to store the basic objects needed for getting a job, such as a suit and a tub or shower; this, in turn, leads to a self-reinforcing cycle of poverty and homelessness. Fourth, consequently, homelessness can reinforce ancillary problems such as lack of medical insurance, which means that when they do end up in the hospital, society must bear the cost.

What aspect of this problem seems particularly important to you?

Homeless shelters play an important role in helping to break the cycle of homelessness and poverty [1]. Long-term shelters provide a safe place for people to store objects, a mailing address, and a steady source of food. Some point people in the direction of government programs that can provide financial assistance with getting housing. Other shelters provide medical care. Even the most basic shelters provide food and a warm place to get through the night.

However, shelters often lack sufficient materials to help the homeless in their geographic area. For example, they might lack adequate supplies of food, bedding, and medicine. They also might lack adequate information, such as information about new government programs, local community programs, or other homeless shelters that could take up the slack.

How could a new software system help to solve this aspect of the problem?

A new software system could help to supply homeless shelters by putting them in contact with people who are willing to provide materials to the shelters. This would allow shelters to draw on the generosity of individuals, government agencies, and other shelters that happen to have a surplus of some materials.

The software system would have three parts.

The first part would be a website and a database that keeps track of people and organizations who are interested in participating as donors or recipients. For example, individual people could register with the website to indicate that they are willing to donate materials periodically, and shelters would register as recipients. Shelters could indicate that they want to receive certain materials. Then, donors could log into the website and find unmet requests. They could sign up to donate the requested material. The system would notify the shelters that their items are on the way.

The second part of the software system would provide shipping services. Any donor could use this service to sign up to have materials shipped to a homeless shelter. The website would then outsource the shipping responsibilities to a selected shipping partner, such as FedEx or UPS. Low rates would be negotiated ahead of time with these companies (volume discounts), but the donors would be charged a slightly higher rate than this lower rate; that way, the website will net a small amount of earnings that could be used to pay for the hosting and maintenance of the site.

Of course, these first two parts of the system are useless until lots of donors and homeless shelters register for the site and start to use it! Consequently, the third part of the software system is intended to help make donors and homeless shelters aware of the website. This part of the software system will search through the web for blogs that discuss homelessness. In addition, it would search for the email addresses to contact homeless shelters located in major American cities. After collecting this information, all the blog owners and homeless shelters could be emailed to ask for their assistance in publicizing the website.

Why do you think that this idea will make a big impact on the world?

There is more than enough food and clothing in the world to meet the needs of every person. The problem is getting it to those people. While there are many stingy people in the world, there are many generous people who would willingly donate materials to homeless shelters, if only they

knew where to send it. Putting donors in contact with shelters would close this gap and help to make the world a better place.

What sources did you use in writing this Vision Statement?

[1] Donna Jones, "Homeless survey shows numbers declining in Santa Cruz, despite ailing economy", *San Jose Mercury News*, Aug 5 2009, http://www.mercurynews.com/centralcoast/ci_12994126

[2] "Preventing Homelessness in America", University of Richmond, 2003, <http://www.solutionsforamerica.org/thrivingneigh/homelessness.html>

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