Problem Definition Summaries for RHoKTO June 2012

Contents

Problem Definition Summary Guide 2

WorldVUZE Classroom Collaboration Summary 4

MaRS Ontario Start-Up Data Summary 6

# Problem Definition Summary Guide

**GOAL: What are you hoping your project will achieve? Who will it help? What will it let them do?**

* This isn't the technical solution. This is what people will be able to do, see or learn by using the technical solution. This is the point of it all.)

**WHY NEEDED: Why is your solution needed? What can’t existing tools solve for your users?**

* If you have researched what is available, tell us what you have found and what the gaps are for your needs. If not, just explain what your users can’t do now that you want them to be able to.

**SOCIAL GOOD: How does your project deliver social good, humanitarian aid or climate change? Why does your project matter to people who care about these issues?**

* These guidelines are somewhat flexible but the hackers are coming out to do social good, deliver humanitarian aid or contribute to climate change. They care about these things. So the more clearly your project supports these mandates, the more support you'll get from the hackers.

**PROPOSED OUTPUT: What do you think the hackers might be able to build for your project in a weekend?**

* Keep in mind - hackers are creative. They might decide to deliver something different from what you had in mind. But your ideas will help get them started and give them a better idea what you're hoping for.)

**USERS: Who are the end users of the solution? Who are the ongoing contributors, crowd sourcers? Who will update and maintain the solution?**

* The better you can communicate to the hackers what you know about your users, the better they’ll be able to meet the users’ needs. Are your users adults or children? Trained or not? Technical or not? What language(s) do they speak? What situations will they be in? (Home, work, mobile, disaster zone, jungle, other?) Any light you can shed on your users will help the hackers put themselves in their place when building a solution.

**USER CONSTRAINTS: What should the hackers know about your users technical constraints?**

* Do users have Internet access? Cell/SMS? High bandwidth or slow? Smartphones or just regular cellphones? Regular computers or specialized devices? What do you know that could be a show stopper for your users accessing the tool?

**SOLUTION CONSTRAINTS: Do you know of any constraints that the hackers should keep in mind?**

* Is the data the solution needs available? Is there any specific platform, technology or language the solution has to work with? Are there non-technical things the hackers must work around, like laws or cultural norms that could affect the end solution?

**DATA SOURCES: What data will the solution need to draw on?**

* Is there a data set you will be providing to the hackers? Do you need them to find data? Or will users create data as they go? If you are providing data, what form will it take?

**KNOWN EXISTING SOLUTIONS: Are there existing tools, platforms, programs or sites that the solution can or must use or fit into?**

* Provides much detail as possible about any existing tools, partial solutions or environments the hackers can or should use. If there’s nothing that’s ok too.

**POTENTIAL TECH SKILLS NEEDED: Are there any tech skills that you know will be needed?**

* Don’t worry if you don’t know what skills you need, but if the hackers will be building onto an existing tool or your users will access from specific devices, that information can help us recruit hackers with the skills your project most likely needs.

# WorldVUZE Classroom Collaboration Summary

**GOAL:**

WorldVUZE has the potential to change the way students learn and teachers teach. The goal is to create real world relevance to Kindergarten to Grade 12 education and ultimately more adept problem solvers.

WorldVUZE is an asynchronous website for teachers where students can immediately explore the ideas, perspectives and experiences of other students from multiple classrooms around the world. The connections are not dependent on time intensive set-up or facilitation by their teacher, they’re not impacted by time zones, unreliable technology or curriculum constraints, and every student has a voice.

**WHY NEEDED:**

It’s solving the problems presented by existing tools which teachers can and do use including; Email, Skype, PenPals, Facebook, Wikis, Blogs and commercially designed tools. The problem is that one of these tools might work for one purpose and another tool for another purpose but each has it’s limitations and most require time intensive set-up and facilitation by teachers and don’t address the myriad of communication roadblocks they’re up against; time zones, alignment with curriculum, different teaching environments and access to technology. The end result is that teachers can easily become frustrated or intimidated by the process and connections then don’t happen or are lost.

**SOCIAL GOOD:**

It’s obvious that as the world and its problems become even more globally connected, it’s important for people to **understand and care how other people live and think.** Helping students understand the relevance and complexity of issues and learn at a young age to shift from making assumptions to asking questions, will better prepare them to collaborate to create effective sustainable solutions.

**PROPOSED OUTPUT:**

We do not expect the fully functional solution to be built in a weekend. What we are looking for is a simple web based (interface) prototype that will show teachers what the eventual platform will look like and let them explore what the platform would allow them and their students to do with it. We are hoping for a prototype loaded with several (6-8) sample profiles that teachers can browse and interact with offline. We also hope that an initial database and data structure can be delivered for us to input the data we will be collecting from classrooms in Tanzania, Fort Albany (Northern Ontario), India, Nepal, and Kuwait. Simple security, e.g. username/password to access the prototype is sufficient at this stage.

If the hackers can deliver more of the solution than this – e.g. a prototype that can be built on to as it becomes the real tool, that would be even better, but we recognize that functionality like privacy and authentication will be more complicated than one weekend’s work can address.

**USERS:**

Teachers and their students, mostly not technical but comfortable using Facebook and other social networking platforms so giving them a similar look, feel and navigation will make it more approachable. For now, English-speaking, though we hope to enable more languages later. Users will be in classrooms with a shared computer, power and Internet source is available. Teachers will input their own profile information and content.

**USER CONSTRAINTS:**

Users are not highly technical. There might only be one computer per classroom. Internet connection and power might not be stable so it is important that data not be lost if sessions are interrupted. Computers might not be latest and greatest so ability to use the solution with older computers is important. Please keep it simple and intuitive – the users are kids and non-technical teachers, but they do know Facebook.

**SOLUTION CONSTRAINTS:**

No known constraints. RHoKTO team suggested they might use Moodle. This or any other platform the hackers feel is appropriate is fine. WV looking to hackers for their expertise on this. Ideally the prototype will be built on a platform that can eventually become the full solution but that isn’t essential.

**DATA SOURCES:**

Teachers will complete profiles with information on their location, areas of study and so on. WV will provide 2 examples already from paper based trial. Additional profiles for the prototype can be created by the RHoK team.

**KNOWN EXISTING SOLUTIONS:**

Grace created wire frames – visuals. WV will provide these to RHoK and we hope the hackers will use these as we have already got positive user feedback on them.

**POTENTIAL TECH SKILLS NEEDED:**

Likely need web developer (HTML, Javascript, CSS), database design, graphic designer (usability, user interfaces), learning-software expertise (sent recruitment message via Joe @ MaRS). Ray can collaborate remotely from Seattle with local tech resources and Grace from Calgary.

# MaRS Ontario Start-Up Data Summary

**GOAL**:

Help convince government agencies supporting innovation to open up their data by demonstrating the value of enabling crowd-sourcing of data solutions.

**WHY NEEDED:**

Without easy access to this information, start-ups and agencies supporting them can`t find one another effectively. Also, many of the government agencies holding this data are reluctant to make the data open, which further limits its value. By demonstrating the power of exposing this type of data to crowd-sourcing, this tool will help convince agencies to open more data.

**PROPOSED OUTPUT:**

A crowd-sourceable map of start-up companies, government start-up support programs, start-up support organizations and resources that MaRS and its partners can add to and use both to share the information with their stakeholders and to demonstrate to government agencies the value of providing open data to input into tools like this.

**USERS:**

Start-ups, government supporting start-ups, NGO's supporting start-ups, people looking to work at or invest in start-ups. Individuals and organizations.

**USER CONSTRAINTS:**

Users are primarily located in Ontario, with reliable broadband and mobile internet access. However, the leaner and more flexible your solution, the more broadly accessible it will be. Don't forget about rural and Northern users on dial-up Internet access and people who have cell phones but not smartphones. The more accessible the solution, the more people who will be able to use it.

**SOLUTION CONSTRAINTS:**

For this first iteration, hackers won't have access to all the data in optimal forms. Screen scraping from public websites might be needed to flesh out official sources in order to reach the project's initial goal and convince government organizations to open their data for easier use.

**DATA SOURCES:**

MaRS will supply some of its own data and some from MaRS partners. Hackers might also need to screen scrape public websites (government services, start-up support orgs, start-up listings )

**KNOWN EXISTING SOLUTIONS:**

Ushahidi (mapping), MaRS prototypes?

**POTENTIAL TECH SKILLS NEEDED:**

Ushahidi expertise, web screen scraping, ... (MaRS tech team flesh this out?)