# Financial Needs

Provide details about operating budget, including high-level breakdown of the budget; describing applicant’s inability to address financial needs without federal assistance. Describe other steps taken to meet financial needs.

Budget (In Progress - Jon)

# Vulnerability Statement

*Demonstrate high risk behavior and living conditions. Description of steps taken to determine de vulnerability and identify target audience. Discuss in-depth in the Narrative Statement. Discuss the specific vulnerability with local statistics: who is at risk, what the risks are, where the risks are, how this risk can be prevented. Informal risk assessment (Our IRB Fire Safety Study)*

## Oregon State University Fire Safety training

## Evaluating Current Fire Safety Knowledge of OSU population

The FELIX project’s goal is to create a cheap, reliable, easily scalable and effective method to teach people about Fire Safety. The need for such a project is born from the current situation in Fire Safety education at OSU. We have used the expertise of Fire Prevention office Jim Patton from ERS, to list all basic knowledge and behavior needed to evacuate a building on fire with minimum injuries.

### List of skills

1. When hearing the fire alarm, attempt to evacuate the building without delay, via the most direct and safe route
2. Call 9-1-1 as soon as possible and safe
3. If there is smoke up high and you can see below the smoke, you should craw on your hands and knees to the nearest exit.
4. If there is smoke from ceiling to floor, find another way out or stay put in your room.
5. If you have to stay put in your room, seal the cracks around your door, call 9-1-1 to report your situation, hang a bright colored sheet from your window and wait by the window to be rescued.
6. If a door is warm or hot, do not open the door
7. If a door is neither warm or hot, open slowly to check the other side.
8. Touch a door with the back of your hand to judge temperature.
9. Never take an elevator, always use the nearest stairs
10. Once out of the building, evacuate to your predetermine assembly point
11. Once out of the building, evacuate at least 50 feet away from the building, out of the way of the emergency vehicles.
12. Don’t be distracted, don’t text, don’t answer your phone, don’t take valuables, don’t wait for anyone
13. Open a window only if you need fresh air for the room.
14. Lower yourself from a window only in a life-saving effort from 2nd floor or below.

We want to evaluate how many of those behaviors are known by the OSU population. Therefore, we designed a semi-structure interview, (an “semi-structured interview”, as described in Jennifer Preece’s book, “Interaction Design” (2002, John Wiley & Sons) is a technique involving a preplanned set of questions, but then interviewees are prompted with neutral questions for more information depending on their answers, until no more information can be elicited.). We wanted to measure their knowledge without biasing their answers, so the interview was designed as a case study: we presented the interviewee with a situation and we guided them from one part of the scenario to the other, while asking them what they would do in such and such situation.

### List of Questions Asked

1. Imagine this room is your dorm room. It is late at night and you are lying on your bed. Suddenly, you hear the fire alarm. What would you do?
2. Your roommate is sleeping in the bunk bed above you, and is saying “Come one, it is the 10th times this month! Go back to bed!” Would you have done the same thing?
3. Can you describe to me how you would exit your room?
4. Did you take anything with you when exiting the room?
5. Now, you made it out of your room, and you are standing in the hallway, and the hallway is full of smoke from ceiling to flour. What would you do?
6. You came back into your room and sealed the door. What would you do now?
7. At this moment you just described, your phone rings. What would you do?
8. You are in the hallway, and you can see under the smoke. What would you do?
9. You are in the hallway, you can see the fire at the end of it and you are next to a fire extinguisher. What would you do?
10. Let’s get away from the fire now. Do you actually know your primary and secondary exit route?
11. Let’s follow your primary exit route. You are crawling in the hallway and pass next to your friend’s room. The door is shut. What would you do?
12. What you would do if you knew that your friend was absent and your friend’s valuables are in that room and could be destroyed by the fire?
13. We are still in the hallway half filled with smoke; you are crawling with your roommate. Your roommate spots the elevator and reaches to press the call bottom. What do you do?
14. You decided to take the stairways instead, and you finally make it outside. What would you do now?
15. What else would you be careful about?
16. How far from the building would you go (in feet)?
17. Do you know where your assembly point is?
18. Do you have any other comments about Fire Safety or this interview?

## Main Results

Sing the interviews transcripts, we coded the answers with the presence or absence of the skills lists above. The results show that…

Fire Safety Study (In progress)

# Community partner

Technology Across the Curriculum has established partnerships with Entreprise Risk Services (ERS) at Oregon State University. ERS is the risk management team of OSU.

ERS will collaborate with TAC through the Emergency Management Program directed by Michael Bamberger, and the OSU Fire Prevention officer Jim Patton. ERS and TAC signed a Memorandum of Understanding for the FELIX project, which describe which resources will be shared for this project. [CAN WE JOIN THE MOU?]

Describes the elements in the MOU (In Progress - Jon)

# Implementation Plan

Goals and objectives. Details regarding the methods and specific steps that will be used to achieve the goals and objectives. Timelines outlining the chronological project steps. Where applicable, examples of marketing efforts to promote the project, who will deliver the project (e.g., effective partnerships), and the manner in which materials or deliverables will be distributed. Justification for the need of an extended period of performance (24 months instead of 12 months). Include intervention strategy.

Need to assess the state of the FireSim.

Create implementation plan from

They actually don’t need

Currently, the FireSim is a very buggy prototype that needs to be finished. Second, we need to develop a curriculum, implement set of activities

Based on the current state of development of the Fire Simula

## Goals & Objectives

The goal of this project is to create a cheap, reliable, easily scalable and effective method to teach people about Fire Safety.

We want to create a Virtual Learning Environment (VLE). A VLE is a computerized simulation that immerses the user in a realistic 3D environment. AVLE shares technical similarities with videogames in terms of computer graphics, but the goal is first and foremost realism and learning by doing. In a VLE, a 3D human body called an avatar represents the user. The user controls all the movement of the avatar (e.g. walking, run, crawling, jumping, touching, opening/closing etc…) and go through the environment as one would go through real-life.

For example, a user starts the simulation in an OSU residence hall room. Suddenly, the fire alarm starts ringing (and will ring throughout the simulation). The user is not prompted with choices to make, but instead is let free to act within the many options offers by the simulation. Will the user decide to open a window? Open a door? Meanwhile, Smoke will soon invade the hallway, then fire will spread throughout the building…

FELIX will support a variety of settings that the student and/or the instructor can customize: the speed and strength of fire, smoke, closed doors etc... TAC’s partnership with ERS will be essential to get those details right.

In partnership with ERS, we plan to implement various type of building. Using the Oregon State University Campus provides a diverse building structure and population to gather various types of user feedback on the pilot project.

OSU has a variety of buildings that are an excellent sample of the building styles and materials used throughout the United States. Building materials range from wood, stone, brick, concrete, and glass. Architecture and design span a period of years from 1857 through 2014 and include interior designs from open format to individual rooms.

OSU’s building use range from:

·  multi‐level apartment/dormitory style

·  single floor residence style

·  multi‐story and single story business purposes

·  small to large classrooms that range from traditional row seating to amphitheater style seating

·  athletic sport venues from indoor arenas to outdoor stadiums

·  chemical, radiological, biological laboratories

·  pre‐school child development centers

·  physical therapy/medical facilities

·  traditional weight room/athletic clubs

·  animal care facilities

Inclusive to OSU is a population of divisive demographics. Target audiences include college aged students, adult learners, adult faculty/staff, after‐hour organizations and activities of all ages, conference centers that host a wide variety of ages and activities, athletic arenas seating 300‐55,000 various aged spectators, pre‐school aged children, etc...

We know that Virtual Learning Environments can positively reinforce desired behaviors.

The Virtual Learning Environment team at TAC is composed of a designer team and a programmer team. The designer team creates the 3D objects in the simulated environement (e.g. buildings, furnitures, smoke, doors etc…) and the programmer’s team implement the code which make the environment come alive.

## Specific steps

We have created a prototype of FELIX, in which you can control your avatar and learn to escape an OSU dormitory.

## Timeline

## Marketing Effort

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# Evaluation Plan

Projects should include an evaluation of effectiveness and identify measurable goals. What are the goals, how to measure them.

# Cost-Benefit

Maximize the level of funding that goes directly into the project.

1. ß

# Sustainability

Demonstrate that the overall activity will be continued beyond the grant performance period and whether it has potential for long-term benefit.

# Funding Priority

Is our project in the funding priority list?

# Experience & Expertise

Technology Across the Curriculum is currently partnering with the department of Public Health of Oregon State University to develop a

Demonstrate that we have the experience and expertise on similar projects