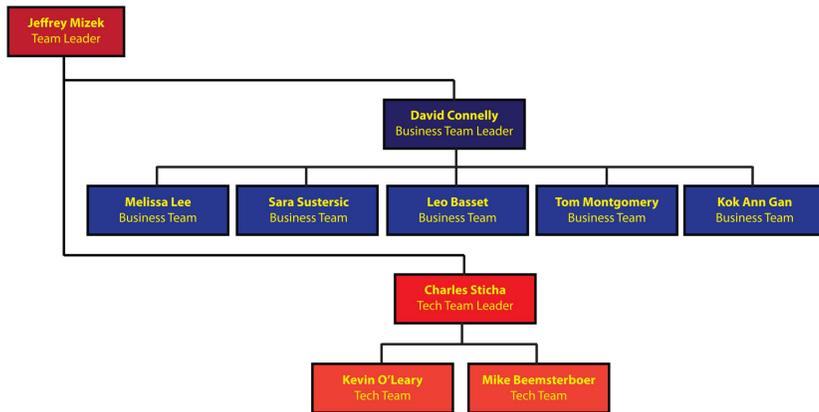


IPRO 355- Enhanced Vision System For Construction Safety

Team Structure:



OUR GOAL:

- To develop software for a handheld device to:
 - Display a 2-D maps upon which utility lines are superimposed (like a GPS)
 - Log the time and location of the user

• Fall 2008 Focus:

Provide product, market, and technical research for the Spring 2009 IPRO to develop the software



Features:

- Software application for handheld device
- Provides image of utility line on screen
- Mountable on any heavy machinery vehicle
- Detachable from vehicle for handheld use
- Provides visual and auditory warning system
- User-friendly interface
- Easy to update with new utility information

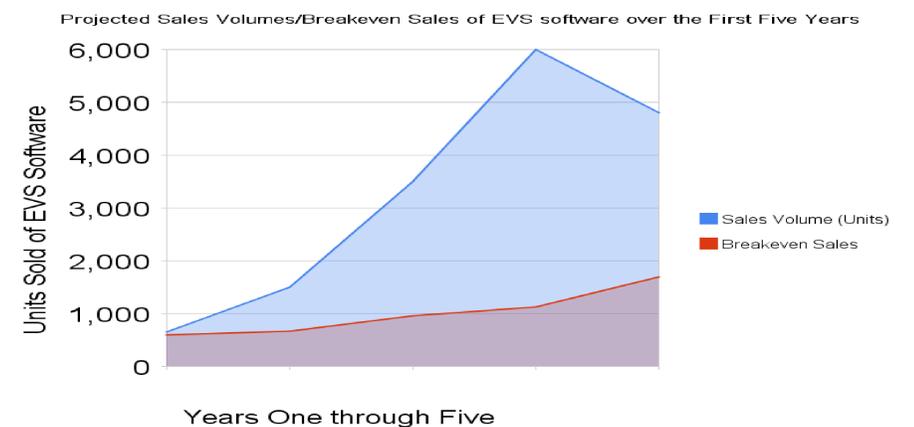
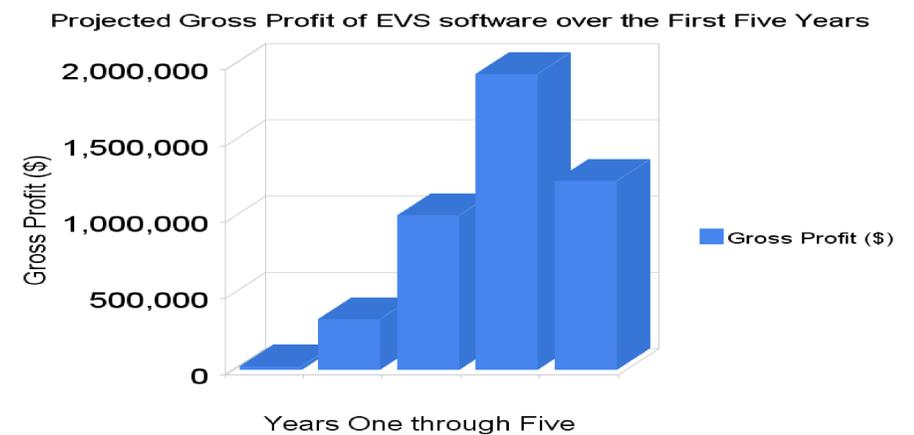
Target Market:

- Construction companies
- Companies manufacturing construction safety tools

Marketing Strategy:

- Accessory/add-on to construction site tools
- Website sales
- Salesperson/cold-calling to companies
- Direct sales to heavy machinery producers

Business Analysis:



The Problem

Dangerous accidents occur at construction sites due to the severing of utility lines by heavy machinery

- Current systems in Illinois involves calling a non-profit organization (J.U.L.I.E).
- Uses paint, stakes, or flags, which are easily removable

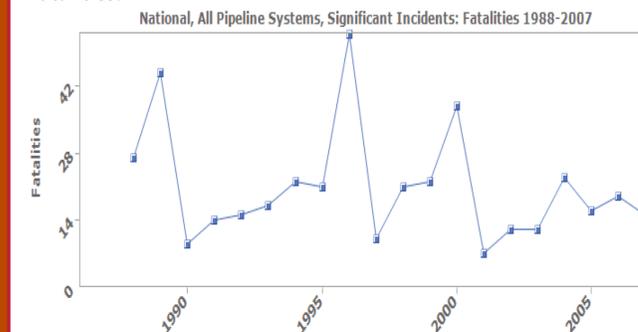
Severe loss of production, utility services, property, and most importantly, lives



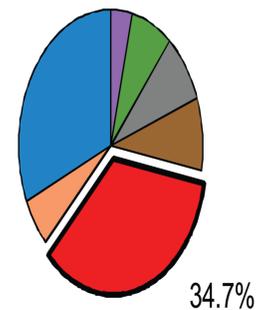
Significant Pipeline Incidents from 1988-2007:

(Source: PHMSA Significant Incidents Files Oct. 14, 2008)

Fatalities:

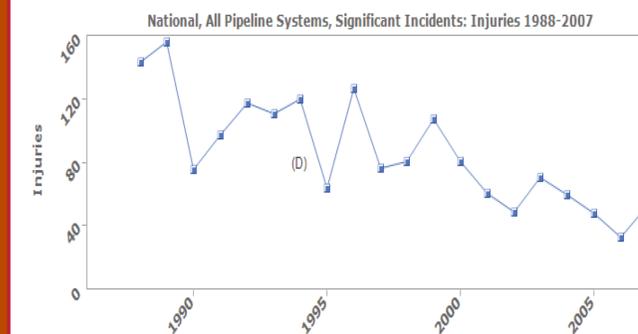


Source: PHMSA Significant Incidents Files October 14, 2008



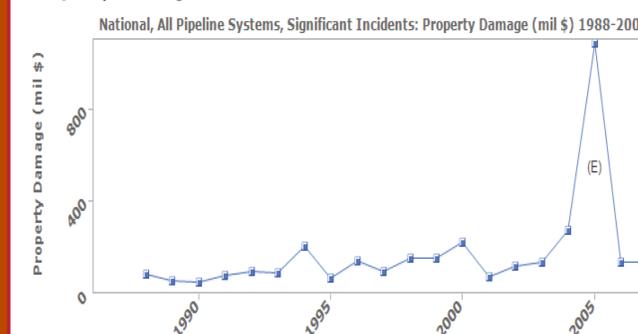
34.7%
Percentage of pipeline accidents caused by excavation damage

Injuries:



Source: PHMSA Significant Incidents Files October 14, 2008

Property Damages:



Case Study:

In January 20, 1999 a backhoe operator damaged a steel natural gas service line and a water service line while digging a trench behind a building at 406 Alabama Avenue. Three buildings: 404, 406, and 408 Alabama Avenue were destroyed due to two leaks in the natural gas service line.

This incident resulted in three fatalities, five injuries, and one minor injury.

While the cause of the accident was bad planning of the excavation, there was no clear indication of the dig site. While it was said that the service lines were painted in blue, the Safety Board investigators were unsuccessful in finding those markings at the accident scene.

