# **Business and Enterprise Analysis**

## Research for Enterprise

### Industry Segment

* + - * Forestry Industry
      * Platform for predicting wildfire behavior
      * Platform is freely available on the internet as a web application

### Products and Services

* + - * 3D aerial imagery, topographical maps, or street maps
      * Campbell Prediction System (CPS) “alignment of forces” information
        + Collection of stories and information regarding wildfire situations
        + Doug Campbell had 30 years of wildfire experience and 10 years of course development experience
      * Observe fire spread computations
      * Simplified graphics to explain fire environment and fire behavior
      * Animates the paths the fire would take through terrains

### Market

* + - * First responders and dispatchers in locations in which wildfires occur
      * Residents of areas that have an increased risk of wildfires occurring
      * Investors in the forest market industry
      * Forest scientists
      * Land managers
      * Home owners

### Business and Organizational Structure

* + - * Software Development and Consulting Business
      * Free software developed by Bruce Schubert
      * Open source software

### Value Chain

* + - * Inbound Logistics
        + Fire behavior analysts send fire signature, weather, environment, and fire perimeter information to the CPS
        + VMS Map Servers send Terrain Imagery and elevation to the CPS
        + USGS Landfire servers send Fuel model and vegetation layer data to CPS
        + The Fire History database sends fire signature records
      * Operations
        + The CPS aggregates all of the given data detailed in the Inbound Logistics section and calculates the desired information
      * Outbound Logistics
        + Sends potential fire behavior, trigger points, and IAP maps to Operations Personnel
        + Sends a fire signature update to the Fire History Database
      * Marketing and Sales
        + Open Source Developers
        + Wildland Firefighters
        + Fire Management Personnel
      * Services
        + Open Source Development for improving the product
        + Through open source development, the product is made free to consumers

### Stated Areas of Differentiation

* + - * Open source allows addition of features that can happen much faster than individual companies by having a wide variety of influences
      * The creator of the software provides information on the prediction system and extensive documentation on all of the features to help users understand
      * There are various test scenarios and features to help users explore the platform

## Analysis

### 5-**Force Analysis**

* + - * Bargaining Power of Customers
        + Low bargaining power of customers since there aren’t many alternatives
        + Less price sensitive since the impact of stopping wildfires is tremendously high
        + Buyer power is less because buyers are not cost sensitive since the software is free
      * Threat of Substitute Product
        + Threat exists due to other software existing, some open source and some paid
        + Lower propensity to switch software due to learning curve
        + Switching cost could be higher since Emxsys is free
      * Bargaining Power of Suppliers
        + High bargaining power due to limited amount of software available
        + Importance of volume is low due to software being free
        + High bargaining power due to cost of users switching can be high due to price difference and learning curve of software
      * Threat of New Entrants
        + Lower threat of new entrants due to current users of Emxsys software are less likely to switch products since the first responders and targeted audience of the software is likely less tech-savvy so the audience is less likely to learn new software. The target audience is also likely to want to stick to how things have always been done.
      * Competitive Rivalry
        + The CPS system Emxsys uses is unique so competitors are less likely to use it.
        + Emxsys plans on developing instructors in fire agencies to use their methods so users are likely to be loyal with the software.

### **Differentiation vs Competitive Competition**

Emxsys’s strategy of differentiation is justified by its current competitive position because of its status as a unique tool in the emergency management and forestry industry. Its use of the CPS system and innovative approach to fire prediction as well as its open source model gives Emxsys a competitive edge by being a unique product with a low cost to entry.

### Balanced Scorecards

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Theme:  Marketing & Sales | Objectives | Measures | Targets | Initiatives |
| Financial | Increase profits  More customers purchase the software | Comparing annual profit year by year | 100% profit increase for the first year from sales | Sell to government agencies |
| Customer | Customer can ensure a consistent and well kept product | Customer satisfaction survey  Customer growth year-to-year | 90% customer satisfaction  50% annual growth each year | Follow the current standards for software development in order to have easy platform usage |
| Internal Business Processes | Build software development team | Number of developers on the software team | At least 10 developers on the team | Target significant open source contributors |
| Learning & Growth | Learn how to take the open source program to for-profit | The % of the entire program that can be made for-profit | 100% of the program switched to for-profit | Compensate open source contributors fairly for their work |

Linking:

* Learning & Growth: The team will need to learn the process and how to take the platform from being an open source program and turn it into a for-profit product.
* Internal Business Processes: This knowledge will allow the team to start building up a software development team in order to continuously develop the software and produce the best program.
* Customer: Due to having an consistently updated and easy-using software, the product is very marketable to customers looking for software attempting to aid in wildfire analysis and prevention.
* Financial: Having an increase in the amount of customers will increase the revenue and profit for the company, and, due to the success of the product, other customers and government agencies will have interest in this software as well.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Theme:  Services | Objectives | Measures | Targets | Initiatives |
| Financial | Increase profits  Increase Retention | Comparing annual revenue year by year  Compare annual retention for customers | 100% profit increase for the first year  Gain more customers than lost | Sell to government agencies |
| Customer | Customer can reach out to customer service team with various questions | Monitor number of customer questions  Create feature if numerous customers are asking | Respond to 100% of customer questions  Create the features customers are asking for | Give awards / incentives to customers for using the team |
| Internal Business Processes | Create Customer Service team / platform | Have a dedicated team for answering customers | 5 employees on the team by the end of the first year | Pay competitive wage for the position |
| Learning & Growth | Increase knowledge of the platform by everyone in the company | Complete training for background and basic usage of the program | 90% of employees complete the training | Give employees small bonus for completion of program |

Linking:

* + - * Learning & Growth: The team will need to understand the basic usage of the platform in order to aid in helping customers out.
      * Internal Business Processes: Using this knowledge, a customer service team will be created to interact with customers to discuss their needs and wants.
      * Customer: The customer will directly contact the customer service team who will help answer any questions and log any issues that cannot be solved by the current application.
      * Financial: By having a customer service team, customers will be happier because they will feel wanted. Their questions will be answered and their wants will be considered. These wants (by the people actually using the platform) will help push the application forward with consistent updates that will be very beneficial.

## Software Portfolio

In order to successfully implement the changes discussed using the balanced scorecards, new software applications will need to be created. These new applications will aid the company by promoting growth, increasing revenue, nurturing customer satisfaction, and expanding the features of the application itself.

### Marketing & Sales

* + - * Geolocation Analytics Tool
        + This feature would be run internally, and it would leverage the platform as well as the CPS in order to proactively predict future wildfires and any potential disaster situations. Using this tool, the company would be able to inform the local authorities about the possibility of a disaster and attempt to sell or license the product to help control the impending wildfire.
      * User Demographic Tool
        + This feature would take data regarding the users of the platform. It will help analyze the “typical user”. Using this information, the company will then be able to better identify potential customers and reach out to the customers themselves, rather than waiting for customers to reach out to the company.

### Services

* + - * Customer Service Hub
        + This application would be used to provide a portal for customers to contact customer support, ask questions, see FAQs and previously asked questions. This would provide customers with an appropriate outlet to address any concerns and seek support.
      * Tutorial Tool
        + This tool would serve to provide users with tutorials on how to use the software as well as give explanations on how CPS works as well as the many terms associated with CPS. This tool would help reduce the hurdle associated with learning about the CPS system so that customers would have an easier time integrating with the software and employees could use these tutorials to better learn about the service themselves as well as refer customers to them.

### Application to Develop Further

The application that would be the most beneficial to develop further would be the Geolocation Analytics Tool. This application would be an easy extension of the current application, which provides the company a relatively immediate solution for cash flow. By configuring the ability to run the application in the background and identifying the necessary authorities to alert, the product will show the accuracy of the CPS and how essential the product is for these areas that are impacted by wildfires. Thus, creating a demand for the product by companies and government organizations.