**ABC Company**



**Hibiscus E-Healthcare Systems**

**Risk Management Plan**

**Version 1.0**

**Revision History**

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|  | **Risk Management Plan** | |

1. **Introduction**

Healthcareis a field in which accurate record keeping and communication are critical and yet in which the use of computing and networking technology lags behind other fields. Healthcare professionals and patients are often uncomfortable with computers, and feel that computers are not central to their healthcare mission, even though they agree that accurate record keeping and communication are essential to good healthcare. In current healthcare, information is conveyed from one healthcare professional to another through paper notes or personal communication. For example, in the United States, electronic communication between physicians and pharmacists is not typically employed but, rather, the physician writes a prescription on paper and gives it to the patient. The patient carries the prescription to the pharmacy, waits in line to give it to a pharmacist, and waits for the pharmacist to fill the prescription. To improve this process, the prescriptions could be communicated electronically from the physician to the pharmacist, and the human computer interfaces for the physicians, nurses, pharmacists and other healthcare professionals could be voice enabled.

**1.1** **Purpose**

Main purpose of this project is to design a distributed e-healthcare system that uses the Service- Oriented Architecture as a means of designing, implementing, and managing healthcare services. The prototype distributed e-healthcare system uses SOA to enforce basic software architecture principles and provide interoperability between different computing platforms and applications that communicate with each other. Although our distributed e-healthcare system provides user-friendly interfaces for busy healthcare professionals and patients, security and privacy are particularly important in this area, so we designed the prototype with security and privacy in mind. The system authenticates users and logs session information and attaches resources to the resource creator, so that only privileged users can view or modify the data.

**1.2** **Scope**

Effective and timely communication between patients, physicians, nurses, pharmacists, and other healthcare professionals is vital to good healthcare. Current communication mechanisms, based largely on paper records and prescriptions, are old-fashioned, inefficient, and unreliable. When multiple healthcare professionals and facilities are involved in providing healthcare for a patient, the healthcare services provided aren’t often coordinated. Typically, a physician writes a prescription on paper and gives it to the patient. The patient carries the prescription to the pharmacy, waits in line to hand the prescription to the pharmacist, and waits for the pharmacist to fill the prescription. The pharmacist might be unable to read the physician’s handwriting; the patient could modify or forge the prescription; or the physician might be unaware of medications prescribed by other physicians. These and other problems indicate the need to improve the quality of healthcare.

A distributed electronic healthcare system based on the service-oriented architecture (SOA) can address some of these issues and problems. We developed a distributed e-healthcare system for use by physicians, nurses, pharmacists, and other professionals, as well as by patients and medical devices used to monitor patients. Multimedia input and output—with text, images, and speech—make the system less computer- like and more attractive to users who aren’t computer-oriented.

**1.3** **Definitions, Acronyms and Abbreviations**

* **Role-based access control (RBAC)** is important because personnel could change but the position and access to the safe information keeps stable. With a role-based model it becomes easier to maintain access control, assign privileges, and personnel to the appropriate role.
* **An extensible markup language (XML)** is used to enforce this policy because it is a web-based technology that is good for data transportation and security**.**
* **Http** stands for Hypertext Transfer Protocol**.** Http is a protocol used in the client side web browser used mainly in the access of data on the World Wide Webto facilitate the access of documents distributed throughout the world, Http uses Locators the URL stands for uniform resource locator for specifying any kind of information on the internet.
* A graphical tool is used to describe and analyze the moment of data through a system manual or automated including the process, stores of data, and delays in the system.
* Data Flow Diagrams are the central tool and the basis from which other components are developed. The transformation of data from input to output, through processes, may be described logically and independently of the physical components associated with the system. The DFD is also known as a data flow graph or a bubble chart.

The Basic Notation used to create a Data flows are as follows:

* **Dataflow**: Data move in a specific direction from an origin to a destination.
* **Process**: People, procedures, or devices that use or produce, (Transform) Data. The objective component is not identified.
* **Source:** External sources or destination of data, which may be People, programs, organizations or other entities.
* **Data Store:** Here Data stored or referenced by a process in the System.

**1.4** **References**

* Core Java™ 2 Volume I – Fundamentals 7th Edition Cay S. Hortsman
* Pearson Education – Sun Microsystems Gary Cornell
* Core Java™ 2 Volume II – Advanced Cay S. Hortsman
* Head First Servlets & JSP Eric Freeman
* The Book of JavaScript 2nd Edition Elisabeth Freeman
* http://www.oracle.com/us/industries/healthcare/ehealthcare-patient-management-wp-173073.pdf
* http://thielst.typepad.com/files/technology-column-2.pdf

**1.5** **Overview**

Healthcare is a field where information has to be maintained properly. This field needs to create a user-friendly system, which guides users at all steps they need to perform in it. The information provided by the users must be kept secured, as the healthcare information is very much confidential. The prescriptions for a certain patient are forwarded electronically to the pharmacy. This avoids the unnecessary time taken by the patient to carry the prescription to the pharmacy.

1. **Risk Summary**

The main risks involved in the **Hibiscus E-Healthcare Systems** are:

1. Identify the factors that might cause a risk in the project.
2. Analyze risks and quantify them based on the deadlines of the cost and budget of the project.
3. Everything in this project is taken care and updated manually. Changing information in the excel sheets may results in altering unwanted content.

This product is expected to complete with estimated cost and scheduled time. As this product is independent, any hardware change does not disturb the performance of the system. Hence, the risk of creating certain updates for particular hardware can be avoided. However, for any software update releases, this product can still work with the upgraded version but few minor changes must be made.

1. **Risk Management Tasks**

* **Identify**: Risks are to be identified well before they affect the project. The risks are first identified, and prioritized accordingly. Every person in the project has to perform brainstorming, and every individual’s participation is taken into consideration, and the risks are identified.
* **Analyze**: For taking decisions (by the manager), it is very important that we analyze the risks in a project. This also involves prioritizing of risks.
* **Plan**: Here, the Risk information is turned into decisions and actions.
* **Track:** Continuous monitoring of risks and actions against risks are done.
* **Control**: There is always a tendency that we get a better plan. But the trick here is to stick to a plan and never deviate for that plan because change in plan sometimes may result in change in entire project.
* **Communication**: the different personnel in the organization must follow Risk Management ethics throughout the process of Software life cycle, and should be able to communicate the risks for managing and taking intelligent decisions

**4. Organization and Responsibilities**

The world electronic market is forecast to expand at a 4.7 percent average annual growth rate until 2012. This is faster than the general economic growth rate, which will expand by 2.4 percent in 2014, and around 3 percent per year until 2018.

The European market, while not the fastest growing, will be the most important counting for over 50 percent of all international arrivals). Within India Europe, France, Italy, and Spain are the most popular destinations. This is why we have selected operators with appropriate products in these areas as our initial partners.

* **Stakeholder Summary**

|  |  |  |
| --- | --- | --- |
| **Name** | **Represents** | **Role** |
| User | The actual users are the marketing people. | Specifies requirements, plans and organize buying and selling. The marketing people who takes part of advertising. |
| Customer | They are the only scope of the business by buying the products.. | There will be a direct relation. |

* **User Summary**

|  |  |  |
| --- | --- | --- |
| **Name** | **Description** | **Stakeholder** |
| Manager | A class of user who is responsible for overall management and control of the purchase. | Represented by the user. |
| Marketing User | A class of user who will take care of the market position, statistics and the customer relationship. | Represented by the user. |
| Interface User | A class of user maintains the website of the company update all the details and maintains a database for the records. | Represented by the user. |

* **User Environment**

The user views all the details provided by the administrator according to privilege. The Customer gives an order of stamps, letters to the user and also provides catalog information to the user. Customer buys the mobile cards, pays the bills and also views the previous bill details.

* **Key Stakeholder / User Needs**

The development of this new system contains the activities, which try to develop online application by keeping the entire process in the view of database integration approach. The system to be implemented involves a well maintained guided **ABC Healthcare Worldwide**. The public can use the guided website to choose a service and pay the money for it. The public should register with the website. Once done they can log in to view packages and tours available.

1. **Budget**

In the first 3 months, the construction costs include the cost of requirements and the cost in designing the project. Hence we cannot expect profits. The benefits can be expected after 9 months as the amount invested in the project can be recovered in 2 to 3 months.

## Major Steps in the Benefit-Cost Analysis Process

* Establish objectives
* Identify constraints and specify assumptions
* Define base case and identify alternatives
* Set analysis period
* Define level of effort for screening alternatives
* Analyze traffic effects
* Estimate benefits and costs relative to base case
* Evaluate risk
* Compare net benefits and rank alternatives
* Make recommendations

The benefits and costs are in constant value dollars. The level of effort allocated to quantifying benefits and costs is proportional to the expense, complexity, and controversy of the project.

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| --- | --- |
| **WBS Element** | **Budget Percentage** |
| Management | 20% |
| Environment | 9% |
| Requirements | 12% |
| Design | 15% |
| Implementation | 34% |
| Assessment | 8% |
| Deployment | 7% |

1. **Tools and Techniques**

For risk analysis in ABC Healthcare Worldwide, we use techniques that deal with conflicting cost and performance goals, uncertainty. These techniques are used to analyze, evaluate, structure and document difficult problems:

Model View Controller (MVC) applied to web applications. Hence the two terms can be used interchangeably in the web world. MVC originated in Small Talk and has since made its way into Java community. Model 2 architecture and its derivatives are the cornerstones for all serious and industrial strength web applications designed in the real world.

The main difference between Model 1 and Model 2 is that in Model 2, a controller handles the user request instead of another JSP. The controller is implemented as a Servlet. The following steps are executed when the user submits the request.

The important aspects of Hibiscus E-Healthcare Systems are determining the important variables to analyze the decision model and evaluating the decision model to calculate the possible outcome. To communicate risk analysis results by sharing insights to facilitate decision making.

1. **Risk Items to be Managed**

**Market Risk**:

This is the most familiar of all risks referred as volatility; market risk is the day-to-day fluctuations in a stock's price. Market risk applies mainly to stocks and options. As a whole, stocks tend to perform well during a bull market and poorly during a bear market - volatility is not so much a cause but an effect of certain market forces. Volatility is a measure of risk because it refers to the behavior, or "temperament", of your investment rather than the reason for this behavior. Because market movement is the reason why people can make money from stocks, volatility is essential for returns, and the more unstable the investment the more chance there is that it will experience a dramatic change in either direction.

**Foreign-Exchange Risk**:

When investing in foreign countries you must consider the fact that currency exchange rates can change the price of the asset as well. This risk applies to all financial instruments that are in a currency other than your domestic currency.

As an example, if you are a resident of America and invest in some Canadian stock in Canadian dollars, even if the share value appreciates, you may lose money if the Canadian dollar depreciates in relation to the American dollar.