

PROJECT RISK MANAGEMENT PLAN

PROJECT BITMARK

The BITMARK PROJECT TEAM

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PROJECT OVERVIEW

The Bitmark Project Team is to develop and implement Bitmark's Marking Initiative via global viral adoption. It shall be initially integrated through Slack, Twitter, IRC, and Bitmark.co for preliminary testing and bootstrapping. Extensive testing of the Marking API shall be conducted to ensure reliability and ease of use, once satisfied we shall go live with GetMarked.org, our flagship site with fully functional Marking capabilities. Doing so will merge social aspects of the web and cryptographic currency for the purpose creating a scalable and massively viral reputation backed monetary system, which increases the fluidity of money via off chain micro-transactions, between individuals based on the value of their everyday activities and interactions. The realization of these goals creates a cryptographic reputation backed currency mounted on the web to form a decentralized and distributed web of trust.

To accomplish this, Project Bitmark will gather a broad range of requirements through widespread adoption, we will use these requirements to define and build a (Representational state transfer) RESTful uniform API. (REST information can be found here: http://www.ics.uci.edu/~fielding/pubs/dissertation/rest_arch_style.htm). In doing so, we will enable a scalable architecture, interoperable components, and extensible design - allowing critical growth and wide spread independent innovation. This API will fundamentally change the shape of the Application Network and address major current limitations to scalability, innovation, and adoption. Our innovation is to allow others to innovate, specialists to specialize, and teams to compete. They are better at it than us, and will produce far more useful and interesting things.

INTRODUCTION

Since the inception of Project Bitmark, our team has begun operating in an area of uncertainty that comes along with developing new, unique and revolutionary products and services. By doing so, we take chances which results in risk playing a significant part in any project, as is the case with Project Bitmark. The purpose of the risk management plan is to establish the framework in which The Bitmark Project Team will identify risks and develop strategies to mitigate or avoid those risks. However, before risks are identified, managed, and mitigated, there are preliminary project elements that must be completed. These elements are outlined in the risk management approach.

Before risk management begins, it is imperative that we establish a foundation for providing structured project information, thus, the following project elements were completed and defined prior to developing this Risk Management Plan:

- Define work scope, schedule, resources, and cost elements
 - Develop project WBS/WBS dictionary
 - Develop master schedule and detailed schedules
 - Estimate project cost and finalize budget
 - Identify required and available resources
 - Establish performance measurement metrics

- Define minimum and maximum baseline thresholds
 - Schedule

- Resources
- Cost
- Baseline reporting requirements
 - Format
 - Frequency of distribution
 - Distribution list
- Define Risk Management Roles and Responsibilities
 - Project Manager and Project Sponsor co – chair the risk assessment meetings
 - Project team participates in risk assessment meetings and members serve as meeting recorder and timekeeper
 - Key stakeholders participate in risk assessment meetings

RISK MANAGEMENT APPROACH

The approach we have taken to manage and mitigate risks for this project included a methodical process by which the project team via an open Bitmark IRC chat, identified, scored, and ranked the various risks. The most likely and highest impact risks were added to the project schedule to ensure that the assigned risk managers and team members take the necessary steps to implement the mitigation response at the appropriate time during the schedule. Risk managers will provide status updates on their assigned risks in the weekly project team meetings. Additionally, they may choose to identify the risks probability to greatly impact or effect the project. Such cases would call for immediate escalation and dissemination of the noted risk. Upon the completion of

the project, during the closing process, the project manager will analyze each risk as well as the risk management process. Based on this analysis, the project manager will identify any improvements that can be made to the risk management process for future projects. These improvements will be captured as part of the lessons learned knowledge base.

RISK IDENTIFICATION

For this project, risk identification was completed using the following:

Expert Interview

- Stat Dude (Senior Network Administrator) Assists Project Bitmark with statistical analysis of network volume and adapting to rapid volume increases. He provides valuable information regarding the security, stability, reliability, and scalability of our networks.
- Tdoka (Owner and operator of a high-powered mining pool) He has contributed to the specifications of our Investor Public Mining “IPM” Pool.
- Androidicus (Crypto Currency expert & Entrepreneur) Launched cryptocloudhashing.com and has contributed many ideas towards adoption initiatives for Marking system and integration .
- IIF (Oil Trader & Crypto Currency Investor) He has been vital to planning a risk mitigation strategy for ‘bad actors’ which plan to perpetrate pump and dump schemes.
- MelvinCarvalho: Software Developer that has assisted Mark with the development of the API and many other software engineering requirements. Has now become key member of the Project Bitmark Team

Risk Assessment Meeting

For this project, risk identification was conducted in the initial project risk assessment meeting. The team identified risks by brainstorming possible scenarios and by relying on firsthand both the project sponsor and project manager chaired the risk assessment meeting via Bitmark IRC Chat. Prior to the start of each meeting we shall distribute documentation which identifies the risk that the meeting will focus on. At the conclusion of all meetings a copy of the chat log shall be titled and archived for future reference.

Historical Review of Similar Projects

A historical review of similar projects was used to identify some of the risks for this project. Projects include in the review were

- Bitcoin & Litecoin: A fusion of the latest stable releases of Bitcoin and Litecoin
- Bitcoin Core version number v0.9.2.1.2
- Alt-Coins: With some modifications from other coins

Through the project, additional risks may be identified. When a potential risk is identified, the Project Manager, Project Sponsor, and Bitmark Project Team shall gather via Bitmark IRC chat to evaluate the potential risk. If the team determines that the risk applies to the project, it will be added to the Risk Register and follow the evaluation process described below.

RISK QUALIFICATION AND PRIORITIZATION

In order to determine the severity of the risks identified by the team, a probability and impact factor was assigned to each risk. This process allowed the project manager to prioritize risks based upon the effect they may have on the project. The project manager utilized a probability-impact matrix to facilitate the team in moving each risk to the appropriate place on the chart.

- To develop the probability-impact matrix, the following probability scale was used:

	Relative or Numerical Scale Shown				
	Very Low .10	Low .30	Moderate .50	High .70	Very High .90
Probability of a specific risk occurring	Very Low risk have less than 10% probability of occurring	Low risk have a range from 10% to 30% probability of occurring	Moderate Risk have a range from 31% to 50% probability of occurring	High Risk have a range from 51% to 70% probability of occurring	Very High risk have a range from 71% to 90% probability of occurring

An impact scale for various aspects of the project was created to assess the impact of the occurrence of a specific risk on the project. The impact of each risk was assessed for each of the major objectives of the project which include cost, time, scope, and quality. Overall impact of the risk was defined as the highest risk category for one or more of the objectives. Thus if a risk was assessed as low in terms of cost impact but high in terms of time impact, the impact was rated as high on that risk.

Impact Scale for Risk on Major Project Objectives					
Project Objective	Relative or Numerical Risk Scales				
	Very Low .05	Low .10	Moderate .20	High .40	Very High .90
Cost	No cost increase	Insignificant cost increase	Some cost increase equal to less than 0.2 BTC	Significant cost increase equal to or greater than 0.5 BTC	>40% cost increase
Time	Insignificant time increase	Small time increase “1 day or less”	Marginal time increase “3 days or less”	Significant time increase “7 – 10 days”	> 20% time increase
Scope	No Scope decrease noticeable	Scope decrease barely noticeable	Scope decrease noticeable	Scope decrease is significant	Project end item is effectively useless
Quality	No Quality degradation noticeable	Quality degradation barely noticeable	Quality degradation noticeable	Quality degradation is significant	Project end item is effectively useless

The above probability and impact scales were combined into a probability-impact matrix which allowed The Bitmark Project Team to determine appropriate risk score for each of the risks. Based on the risk score, the appropriate type of response was determined for the risk. The probability-impact matrix for threats used for this project appears below.

Probability	Threats				
0.90	0.045	0.09	0.18	0.36	0.81
0.70	0.035	0.07	0.14	0.28	0.63
0.50	0.025	0.05	0.1	0.2	0.45
0.30	0.015	0.03	0.06	0.12	0.27
0.10	0.005	0.01	0.02	0.04	0.09
Impact	0.05	0.10	0.20	0.40	0.90

Risks with a probability-impact rating higher than 0.18 will be handled by avoidance strategies, if possible. Risk ratings from 0.06 to 0.17 will be handled using mitigation strategies. Risks with a probability-impact rating less than 0.06 will be either actively or passively accepted.

A meeting of The Bitmark Project Team via IRC, to include Project Sponsor and Project Manager, was held to determine the risk rating for each of the currently identified risks. Once the risks were assigned a probability and impact and placed in the appropriate position on the chart, the Project Manager moved the process on to the next step: risk mitigation/avoidance planning.

An overall risk score for the project was computed by multiplying the risk scores for the top 5 risks on the project by 100 and computing the average. The possible range of scores using this method is from 1 to 72. A risk score below 16 is low risk project, a score between 16 and 45 is a

medium risk project and a score above 45 is a high risk project. “This project is considered a medium risk project as it has an overall risk score of 22.”

RISK MITIGATION AND AVOIDANCE

The Project Manager and Technical Lead have directed the project team in developing responses to each identified risk. As more risks are identified, they will be qualified and the team will develop avoidance and mitigation strategies. These risks will also be added to the Risk Register and the project plan to ensure they are monitored at the appropriate times and are responded to accordingly.

The risks for this project will be managed and controlled within the constraints of time, scope, and cost. All identified risks will be evaluated in order to determine how they affect this triple constraint. The Project Manager and Project Sponsor, with the assistance of the project team, will determine the best way to respond to each risk to ensure compliance with these constraints.

In extreme cases it may be necessary to allow flexibility to one of the project’s constraints. Only one of the constraints for this project allows for flexibility as a last resort. If necessary, funding may be added to the project to allow for more resources in order to meet the time (schedule) and scope constraints. Time and scope are firm constraints and allow for no flexibility. Again, the cost constraint is flexible only in extreme cases where no other risk avoidance or mitigation strategy will work.

RISK MONITORING

The most likely and greatest impact risks have been added to the project plan to ensure that they are monitored during the time the project is exposed to each risk. Risk monitoring will be a continuous process throughout the life of this project. As risks approach on the project schedule the project manager will ensure that the appropriate risk manager provides the necessary status updates which include the risk status, identification of trigger conditions, and the documentation of the results of the risk response.

RISK REGISTER

The Risk Register for this project is a log of all identified risks, their probability and impact to the project, the category they belong to, mitigation strategy, and when the risk will occur. The project Bitmark team has identified and categorized each risk , then assigned a score based on the probability of it occurring and the impact it could potentially have. The Risk Register also contains the mitigation strategy for each risk as well as when the risk is likely to occur.

Each risk has been added to the project plan, based on the identified risks and timeframes in the risk register. At the appropriate time in the plan—prior to when the risk is most likely to occur—the project manager and project sponsor will assign a risk manager to ensure adherence to the agreed upon mitigation strategy. The each risk manager will provide the status of his or her assigned risk on a weekly basis.

The Risk Register shall be maintained as a separate document but will be under the controls of the processes and procedures documented in this plan.

TOP RISKS

The top three high probability and high impact risks to this project are:

1. “Pump and Dump” scheme perpetrated by bad actors

The scope and magnitude of Project Bitmark caught the attention of many within the crypto community. The Bitmark Project Team was given insider information regarding bad actors which were coordinating a ‘pump and dump scheme’ on the BTM Market (https://poloniex.com/exchange/btc_btm). An attack on this scale, where the market price of BTM rises by 500-1000% then is subsequently dumped to half of its original value, would badly affect Bitmark. This type of attack would also even lasting bad impression, and Bitmark would have a hard time recovering from this.

➤ Probability & Impact = 0.18 (1st Scenario)

➤ Probability & Impact = 0.36 (2nd Scenario)

2. Voluntary Team Members & Contributions

Project Bitmark has been developed by Project Sponsor Mark Pfennig without any expectation of monetary compensation. Additionally all subsequent Projects such as our Marking Initiative & GetMarked.org shall follow these same criteria. We may encounter risks related to individuals who may be:

1. Motivated by greed or monetary gain (and/or)
2. Do not fully understand the terms and conditions regarding their contributions.

To mitigate this, we have established clear-cut requirements for work performed by third parties.

- Probability & Impact = 0.24

3. Bitmark.co and GetMarked.org

The complexities behind Project Bitmark, together with our Marking Initiative together with GetMarked.org, bring your level of risk to the project. The scope of our Marking Initiative calls for worldwide adoption through social web interaction, this translates to new consumers and service providers experiencing crypto currencies for the first time.

Pertinent risks include:

- People's lack of understanding of crypto currencies in general
- Target Audience being incapable of grasping the scope of our project
 - To mitigate these risks, the Bitmark Project Team plans to first implement phases of the project within the crypto community, by testing all systems internally prior to launch.

- Probability & Impact = 0.22 to 0.28

4. Funding:

The 100% donation funded project structure, presents a large risk for Project Bitmark. It is not expected to decrease and shall be viewed as an ongoing Issue.

- Probability & Impact = 0.38



SPONSOR ACCEPTANCE

Approved by the Project Sponsor:

Mark Pfennig
Project Sponsor & Technical Lead

Date: _____