***Sports betting system***

***Requirement specification***

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# Objective of the system

The objective of the company is to develop, integrate into its internal systems and operate a modern web-based gambling and sports betting system that can efficiently challenge foreign web-based gambling sites and can provide an attractive alternative for those who currently do not perform their gambling activities via the Company's website. Company will offer a bookmaker gaming system with fast and high payback percentage, different from its current product portfolio.

This requirement specification describes the general system requirements and the services related to the bookmaker gaming; however, the betting platform shall also introduce other online games of the proposed system. Apart from the sports betting type games it shall provide details on other possible games of the system.

The objective of the document is to describe betting platform minimum requirements. Business and functional requirements

Buying credits is not a mandatory condition prior to entering into the games; the system should be accessible right after registration. The games can be played against an internal account (or wallet) to which funds can be transferred using various payment methods.

(mobile internet, SMS). USSD betting can also be introduced if need be.

## Player registration and players' registry

### Registration

The platform can handle a vast amount of data on the players during registration point; the data that can be set as required; the data that can be changed by the user; and the data that can be changed by the customer care agent with sufficient rights.

The platform will provide a secure player database management possible (encrypted storing) and the use of online query functions (accessible only with appropriate rights).

Multiple registration is forbidden, thus the system shall check the uniqueness of specific data during the registration process (e.g. ID, email address, bank account and specific personal data). If any of these data already exists in the database, the new registration shall be refused and the user shall be duly notified. Players will be required to accept and consent to various terms all of which should be managed by the system.

The platform shall examine the security strength of the password provided at the registration (and shall warn the user if the password has been considered weak or unsecure).

### Responsible gaming standards and functions

The betting platform will have functions which support the responsible gaming standards and requirements of the organizer.

*System functions*

1. Disabling features by the users and/or by the organizer:

− temporary (disabling for a set periods of time),

− final (in this case the player cannot play anymore in the web-based system nor can s/he re-register).

1. Self-limiting functions (limits), that can be applied by the user to limit the amounts of credit usable in/transferable to certain games (or in the overall system) per day, per week or per month.

1. Indication of the time spent at the site since the Login, including any related notification or warning messages based on pre-set parameters.

### Customer service functions (phone, e-mail, chat)

The betting platform contains the following customer service functions integrated into the system.

*System functions:*

− administrator interface with adjustable rights levels for the customer service

− send/receive e-mails (single and bulk)

− internal system messages for registered users (single and bulk)

− ticket system in with which customer service agents can track comments regarding a user

## Internal account (wallet) and its functions

Every player shall have an internal account after the registration. The system shall also be able to manage gift and bonus points associated with an account, granted by the organizer. These points can only be used for gaming and cannot be converted to money.

The account shall be used by the player to pay the price of betting and to receive credit and smaller awards.

Awards with large amounts of money shall not be automatically credited to the players' account. Such awards (amount defined by Company) shall be paid according to rules set by regulation. This action requires a manual verification and approval process. The betting platform has the possibility to manage each award separately depending on the value.

Functionalities of the account management:

− support of multiple payment gateways(Mpesa, Paypal and Airtel)

− differentiate by payment source: prize, recharging or bonus

− management of prize payments (payment approval, recording paid prizes, differentiation and management of small and large prize categories)

− limit setting possibility (for period, game or internal account maximum) on the administration interface for players, groups and every player

## Bonus system

The platform will also have a bonus system which is manageable.

## Recharging the internal account

The betting platform will implement the following recharging methods

# Transfer money from a mobile account to the internal account by integrating the payment solutions of mobile service provider. (Mpesa and Airtel)

# Online payment via PayPal

## Required features of the gaming interface

The platform will have the following overall features of the gaming interface; upon user login at least the following possibilities shall be available:

### Personal data

In this area the player shall be able to change his/her password and the least sensible data. Sensible registration data can only be changed with the help of the customer service (via phone or e-mail).

### Account log

Account movements (recharging, betting, prizes, payments) can be queried and reviewed for at least 180 days. Transactions can be filtered by type.

### Placing Bets

The player shall be able to bet if there is enough money on the account. If there is not enough money, the system shall notify the player and take him/her to the account recharge page (while maintaining the current bet).

Before entering the game, all bets shall be confirmed once more by the player, since there is no possibility to delete a confirmed bet afterwards.

Upon a successful betting, the system shall confirm to the user every detail of the game. The player shall be able to check the details in the Account log anytime for a period of 180 days after placing the bet.

The player cannot ask for a deletion of a confirmed game (bet).

### Information area

News

− Current news, information

− Entering news on the administration interface

Statistics

− Games and statistics of events with as much details as possible

− Using databases from external service providers

Results

− Event results

− Entering results on the administration interface

Contacts

− Customer service and other public contacts

Current betting program

− Loading from administration interface

Live score

− Using data from external service providers

## Base requirements for sports betting games

The betting platform will fully specify the sports betting games of the system together their features.

Required base features for sports betting games:

* unlimited concurrent events
* indication of highlighted events and last minute betting
* live betting (detailed description of the handling logics is required)
* long bet (for weeks, months in advance)
* dynamic odds
* statistics
* administration interface for managing the program and news
* monitoring system to monitor the turnover and the risky bets
* organizer limits for events, outcomes, combinations and users
* possibility to set automatic limits

## Claim and payment of prizes

Only that part of the internal account can be paid as prize that constitutes the amount won; the system displays this amount for the player. Non-prize part of the internal account can be withdrawn in exceptional cases only with approval from the company.

Players shall receive an ID for their bets generated in the central system by the organizer for every game played. Players shall be able to query their bets, prizes and their details up to date.

Small prizes are credited immediately to the players’ internal account. Big prizes are not credited to the internal account; the players shall identify themselves to withdraw these prizes. The organizer shall be able to set the thresholds of small and big prizes.

The page shall display editable informational and other texts.

## Further general criteria

The new web-based gaming system shall be constantly expandable in terms of games, sales channels and new payment methods made available by technological developments. From the players' point of view it shall be a flexible, dynamically developing online gambling site that is 'state of the art'. In addition, strong emphasis shall be put on constant and safe operation since this is the only way to gain and maintain the players' confidence in the long run.

## General legal requirements and provisions

Bearing in mind current gaming regulations by BCLB the regulations mentioned above and the practice of the GB the following can be generally required from telecommunications assets and system (e.g. internet platform):

1. the right to participate in a game shall unambiguously be identified;
2. special requirements need to be developed and applied on the secure storing a subsequent monitoring of gaming data;
3. results shall be determined with a secure, predefined method;
4. reliable and fast search for winners;
5. quick crediting of prizes;
6. players shall be duly informed on the site about the risks of using the internet;
7. providing the security of the players' personal data and other moral rights;
8. fulfillment of tax payment requirements prescribed by the law; calculation, record keeping and payment of income tax to be paid after the prizes;

The system assessed to fulfill the requirements above shall be auditable by an external company according to the GB provisions and the general guidelines of auditing (against external attacks or internal manipulation). It is Company's responsibility to have the audit performed; Company may delegate this task to a specialized enterprise.

# Requirements of the central system

## General requirements

− The system shall support multi-lingual user interface.

− The technology proposed shall provide a long-term solution for Company (both in terms of economy and technology).

− The technological background shall be customizable, reconfigurable to meet the requirements and possibilities of the informatics and the market (upgrades, versions, support, etc.).

− Information generated by everyday operation shall be stored in a database (game parameters, user data, logs, bet data, accounting analytics).

− A real-time monitoring system is a must.

− Dynamic reconfiguration of a game or rules shall be handled in a flexible way.

− The internal information system shall dynamically adapt to the requirements, shall support ad hoc queries and their possible systemization (CRM functions).

− The system shall have CMS functions easily manageable by the Customer.

− Please specify the functioning of the affiliate feature.

− Every user and admin action shall be logged; modification-proof management of the log files shall be provided.

− The system shall provide uniform access security and hierarchically structured rights management for the operating company or its employees.

− The central system shall be able to manage future games even if these games are to be provided by third parties.

− The system shall be modular. It shall be expandable with settings module of new game types. Games centers shall contain the game's internal logic and structure.

− The central system shall have an interface with back office system connectivity. E.g.: Oracle Financial (accounting system), the current web-based and SMS betting system and other possible internal system of Company.

− Please make a list of the supported www browsers.

## Monitoring and report system

The betting platform proposed shall provide different reporting tools that support both the Company's possibly rising monitoring requirements. The monitoring system shall operate in tandem, online, communicating with the central system but independently from the betting system:

− continuous monitoring of business and turnover data;

− continuously providing statistical data;

− continuous monitoring of transactions, capacities and workload.

At least the following information shall be monitored through the system:

− Prize report

− System status and performance report

− Financial activity summary report

− Transaction report per games

− Online sales report

− Per game report on financial activity

− Game status report

− Player login activity report

− Bet risk management

− Dynamic odds compilation (odds providing then uniform handling) − Previously not defined reports and visual/audio alarms

− CRM functions

− Reports can be scheduled

− Web statistics

## Ability to customize game parameters through the central system

− Set minimum base bet amount

Each bet/game has unique base fee. A bet cannot be placed with a lower amount.

− set maximum bet amount Per player:

set daily or weekly limit; self-limiting possibilities Per game: the organizer may set a loss limit for specific outcomes

maximum bet amounts for games

− in the case of bookmaker bet (fixed prize multiplier) the organizer may assign predefined prize multiplier for every winning outcome

# Informatics requirement of the gaming system (security, hardware, availability)

## Hardware architecture requirements

The system shall constitute of modern assets with high availability and fault tolerance and the supplier shall provide support for it. The network structure shall be designed so that the system is expandable in runtime; the system shall have appropriate load balancing. The system shall be able to handle multi-site system solutions, that is when part of a system is physically at a different location. Please specify the maximum distance between the sites. Scalability is imperative by the system design as it is hard to forecast the expected traffic and required capacities for a new system. The architecture shall support the possible runtime upgrade for base and game software versions; the proposal shall specify the applied solution.

The system shall come with a test system also that can be used to test every change, fix and upgrade made to the game and base software before going live and without affecting the live system; as a consequence the test system shall be as similar to the live system as possible.

## Base software requirements

The operation system and database software on the system database and application machines shall be a reliable and fault tolerant type. (Suggested types: Windows and/or Linux and/or Unix or Oracle as Company has significant experience with them). It is a mandatory requirement that the system should use such software and versions for which the manufacturer support is guaranteed for a long period of time; security and other fixes are continuous and upgrade installations can be done.

## Performance requirements

The system shall be able to serve 500 000 registered users or at least 10 000 concurrent users and at least 10 transactions per second. Data management provisions and protection of personal data

Records must be kept of player data. As a consequence, Company performs data management.

Data management shall provide data integrity. User and administrator activities shall be logged. Limited log accessibility must be provided. Non-current data and logs of the system shall be kept in archives.

## Rights managements

The system shall have a rights management that provides appropriate rights distribution for the user and administrator activities of the operator. Every user shall have multiple rights.

## Logging requirements

The system shall have an overall logging solution. Beside administrator activities and other user activities the system shall collect and store log files created in the whole structure; these log files shall be made available for persons with appropriate rights.

## Monitoring system

A monitoring system is required for the continuous monitoring of the system in which it is possible to check the proper function of the hardware and software components. The system shall include message sending functions and - after parameterization - it shall be used to send status and error reports to the system administrator in SMS and e-mail.

Please specify the proposed monitoring system in detail.

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## Backup strategy

The system shall have backup, restore and disaster plan.

The system shall enable full backup (databases, applications, border protection tools) for standard operation. The backups created with a backup plan and related restore plan shall always provide an ASAP full system restore. The document shall specify the time for the worst DRP (Disaster Recovery Plan) that may occur with a malfunction and whether there is a possibility of data loss.

## Archiving

The supplied system shall have a backup or archive solution from which it is possible to find betting, prize or customer data up to a period of 10 years in case of request by authority. The system does not necessarily have to function online but archived data shall be made available within 1-2 days if needed.

## Availability requirements

The system shall operate 24/7 for both 99.99% and 99.95% availabilities.

## Internal or external locks

The data of the games, results and drawings shall be protected by internal and/or external locks against unauthorized modifications.

## Testing procedures

Before going live it is necessary to perform load and process tests beside the base tests

# Business Requirements

## Mpesa Paybill, Airtel Paybill Numbers and PayPal accounts

## Feeds provider (Goal Server)

## Bulk SMS provider

## Internal Bookmakers

## IT Technical support

## Domain Name

## SMS Alphanumeric code

## SMS short code

## Cloud Server

## Backup server

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