2 User Stories

It is worth remarking here that the IFA is represented as one entity (one user) as both the system description document, and the interview did not identify specific participants from IFA (e.g., functions and departments). Dr. Sturm confirmed that, for this early stage, the IFA requirements should be expressed as the requirements of a single entity (called here 'IFA'). However, it's obvious how each requirement can, later, be assigned to a specific function or department inside the IFA (e.g., IT for system requirements, finance for budget monitoring, administration for scheduling, marketing for fan experience improvements).

The user stories are arranged in six thematic epics: leagues, scheduling, budget policy and monitoring, fan portal, system, and implementation procedure and priorities.

2.1 Leagues

- As IFA I want all the information about the current games to be updated on the system portals in real-time so that the system portal is the only official source of information about the league and its games.
- As IFA I want to limit the ability to report on the games in my system to referees only so that I have one source of authorized information about the game.
- As the main referee I want to have a mobile-based reporting tool so that I can report the game events in real-time [1].
- As a side referee I want to have a mobile-based reporting tool so that I can report the game events in real-time [2].
- As a prospect/new team I want to have access to a dedicated portal so that I can register my team in the league.
- As a team manager I want to be able to add/edit/delete my players' details so that I can manage recruiting new players or transferring existing ones.

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[1] Those include in-game events such as goals, offsides, red cards, yellow cards, player replacement. The reporting ideally includes the event and related information (player number, time, …)

[2] IFA (dr. Sturm) indicated that this capability should be available for both the main referee and the side referees.

– As IFA I want to access the teams' records, including transactions, players transfers, and events so that I can track the leagues' activities

– As IFA I want to be able to consider new/potential referees through the system so that I can evaluate their profile for recruitment.

2.2 Scheduling

– As IFA I want to be able to modify the parameters of the game scheduling system so that I can control the automatic scheduling process [3].

– As IFA I want the system to automatically generate game schedule for each league based on the specified parameters so that biases are minimized.

– As IFA I want my agents to be able to modify the automatically generated game schedules so that special events and situations are considered in advance.

– As IFA I want each manual game schedule modification to be approved by two agents (initiator and approver) so that biases and mistakes are minimized.

– As IFA I want to be able to change the game schedule later with adequate justification after it was announced so that I can accommodate unforeseen events (weather, emergencies…).

– As a referee I want to communicate my schedule preferences with the IFA in advance so that my personal commitments are accommodated.

– As IFA I want the referees assignment system to take pre-defined requirements into account while setting the referees schedule so that to minimize the need for reassigning referees (rescheduling referees) [4].

– As IFA I want the system to notify referees about the cancelation of games over the phone rather than the online portal so that I ensure they received and acknowledged the updates about cancellations.

2.3 Budgets policy and monitoring

– As IFA I want to monitor the teams' budgets.

– As IFA I want to access the teams' budgets in real-time instead of annually so that I monitor policy adherence.

– As IFA I want to limit access to each team's budget only to the team's officials and the IFA management so that I maintain the budgets confidentiality.

– As a team manager I want to be able to connect my system to the IFA's so that I can report in real-time.

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[3] Some of the parameters that shall be configurable: minimum time between games for each team, days of the week for games to take place (e.g. weekends), minimum duration between two games of the same pair of teams.

[4] Some of the parameters to be considered in the referees assignment/schedule system are: referees preferences, same referee shall not manage the two games between the same pair of teams, referees shall participate in the same number of games.

2.4 Fan portal

- As IFA I want to provide open access to all information about games, teams, and results so that I improve the leagues transparency.
- As IFA I want the system to present statistics about games, players, teams, and coaches so that I can manage the official source of said statistics.
- As a guest fan I want to have access to all information about games, teams, leagues statistics, and results so that I do not need to search data in different sources [5].
- As a registered fan I want to have access to all information about games, teams, and results so that I do not need to search for data in different sources [6].
- As a registered fan I want to be able to follow my preferred teams, players and/or games so that I can receive push notifications about the teams, players and/or games.
- As a registered fan I want to receive reminder notifications before the games that I follow.
- As a registered fan I want to receive reminder notifications about game cancellations through the portal.
- As a journalist/news agent I want to be able to export information about the teams, players and/or games so that I have a single official source of information [7].
- As a player I want to be able to update my profile on the fan portal.

2.5 System

- As IFA I want the system-to-be structured as one system with different interfaces (fans, teams, IFA) so that to avoid inconsistencies and redundant data.
- As IFA I want the system to support up to 50,000 fans simultaneously.
- As IFA I want the system response time for fans, team administration, and IFA administration to not exceed 1 second so that to enhance the users experience.
- As IFA I want the referees' real-time updates from the games to be prioritized over any other data flows in the system so that the updates are as fast as possible.
- As a referee I want to be connected to the system in real-time during the games so that I can provide the status updates as fast as possible without slowing me down or hindering my ability to manage the game.
- As IFA I want the system to be localizable so that it can accommodate different local regulations, languages, currencies and time zones.

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[5] *Guest fan* is defined as an unregistered user to the IFA portal. Guest fans are allowed access to all data (to improve transparency), however can not follow specific teams, games or players to get push notifications.

[6] *Registered fan* is defined as a registered user of the IFA portal. In addition to accessing all data as guest fans do (as indicated in this user story), registered fans can get push notifications as indicated in subsequent user stories.

[7] The as-is-system description stats that ' unauthorized data collection of the events occur in the games' which can be countered by providing a single source of information to fans and journalists in form of the IFA news portal, according to the IFA vision of the system-to-be.

- As IFA I want the IFA IT team to be able to decide data allocation to different data centers so that the system complies with different data regulations [8].
- As IFA I want the system to keep archived information of previous years so that they are accessible to media personnel and interested fans (e.g., gambling)
- As IFA I want all budget-related information to be encrypted so that I maintain the budget confidentiality.

2.6 Implementation procedure and priorities

- As IFA I want the system to be implementable in a modular way so that I can prioritize my implementation stages [9].
- As IFA I want the system to be accommodating to new modules so that I can add new functionalities in the next versions [10].
- As IFA I want the system development, implementation and maintenance to be outsourced.
- As IFA I want the IFA IT team to act as the client for the system developer so that they handle all communication between IFA and the developer.

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[8] As an example, IFA's CIO (dr. Sturm) mentioned that Germany's legal regulations limit the German users' data that can be stored outside Germany. This level of localization (and similar instances) shall be supported by the system to be.

[9] The proposed implementation steps/priorities provided by IFA (dr. Sturm) are: 1. Basic setup including leagues, seasons and teams, 2. Budget monitoring and scheduling support, 3. Real-time game updates by the referees and fan portal.

[10] IFA (dr. Sturm) indicated the possibility of enabling referees to post non-textual updates in later stages.