

# 1. Conceptual models

Use case UC1: Report game

**Primary actor:** Referee

**Stakeholders and interests:**

Referee: wants to report events of the game during the report, with minimal effort

IFA administration: wants to have accurate and consistent game reports that include all events during the game

**Preconditions:** Referee is assigned to preside over a game

**Main Success Scenario:**

1. System shows the game that will be refereed by the referee
2. Referee starts the game
3. Referee starts game in system
4. System shows events that can happen in game
5. Referee selects event\* in system when such event happens  
*Referee repeats step 3 until 45 minutes into the game*
6. Referee announces extra playing time and reports it in the system
7. System administrates the extra playing time
8. System shows events that can happen in game
9. Referee selects event in system when event happens  
*Referee repeats step 5 until the extra playing time is over*
10. Referee announces the break and reports it in the system
11. System administrates break
12. Referee announces the break is over and continues game in the system
13. System shows events that can happen in game
14. Referee selects event in system when such an event happens during the game  
*Referee repeats step 7 until 90 minutes in the game*
15. Referee announces extra playing time and reports it in the system
16. System administrates the extra playing time
17. System shows events that can happen in game
18. Referee selects event in system when event happens  
*Referee repeats step 10 until the extra playing time is over*
19. Referee ends the game and reports it in the system
20. System closes game
21. Referee adds summary in the system
22. Referee submits the game report\*
23. System saves the game report

**Special Requirements:**

- The system should be available for the referee on a portable device during the whole game.
- The system should respond very quickly and be the first priority during the game.
- The preferred language of the referee should be displayed on the screen.
- A referee should be able to edit the game report till 1 week after the game.

\*event: Events that can happen during the game are fouls, misconducts, restarts, injuries, et cetera.

\*game report: A game report is a report of a football game, reporting all events that occurred during the game and a summary of the referee.

**Source:** Assignment document and the interview

#### Use case UC2: Give availability

**Primary actor:** Referee

**Stakeholders and interests:**

Referee: wants to preside games that are fitting in his/her schedule

IFA administration: wants to reschedule as little as possible.

**Main Success Scenario:**

1. Referee checks his/her calendar for availability during games in the coming football season
2. Referee fills in the availability in system
3. IFA administration schedules referee for games according to policy and according to the availability of referee
4. If schedule is not according to policy, system sends a message that referee has to fill in availability
5. If schedule is according to policy, system notifies schedule is confirmed.  
*If the referee does not confirm, go back to step 2*

**Special Requirements:**

- The referee should be able to check the schedule during the season

**Source:** Assignment document and the interview

#### Use case UC3: Schedule referees

**Primary actor:** IFA Administration

**Stakeholders and interests:**

IFA Administration: schedule referees in games such that every game has a referee and are not in conflict with constraints

Referees: want to be scheduled in for games that are fitting in their schedule.

**Preconditions:** Policy regarding scheduling referees should be determined

**Main Success Scenario:**

1. Referees fills in availability\*
2. IFA administration runs system so that schedule is automatically created
3. IFA administration checks the schedule
4. IFA administration confirms schedule
5. System notifies referees about schedule

\*availability: The availability of referees during the game season. If their schedule is free, then they could referee a game.

**Source:** Assignment document and the interview

#### Use case UC4: Rank games

**Primary actor:** IFA administration

**Stakeholders and interests:**

IFA administration: wants to have rules about ranking before the season starts, so that no discussions about rules will be started during the season

Team: wants to know the ranking rules of the IFA, so that they know how a game will affect their ranking in the league

**Preconditions:** Rules of ranking are determined and captured in the system

**Main Success Scenario:**

1. IFA administration approves game report
2. System calculates new ranking of the game's league based on the game report
3. System updates ranking on the portal

**Special Requirements:**

- The ranking of the leagues should be available any time.
- The ranking of the leagues have to be explicitly saved.

**Source:** Assignment document and the interview

Use case UC5: Manage resources

**Primary actor:** Team\*

**Stakeholders and interests:**

Team: wants to manage resources\* correctly and according to the IFA rules

IFA Administration: wants to check the (use of) resources of the teams regularly.

**Preconditions:** Team is registered in the system. Available resources of the team are registered in the system.

**Main Success Scenario:**

1. Team purchases/uses/sells resource
2. Team enters action (purchase/use/sale) in the system
3. System automatically checks if action is legal according to the policy of IFA
4. System approves action
5. System notifies team and IFA administration about approval

**Extension:**

3. If action is not legal:
  - a. System disapproves action
  - b. System notifies IFA administration
    1. IFA administration confirms disapproval
      1. System notifies team about disapproval
      2. Team cancels the action
    2. IFA administration overrides disapproval
      1. IFA administration logs why the action is approved
      2. Other member of IFA administration checks the log
      3. Other member of IFA administration confirms the log
      4. System notifies team about approval of action

**Special Requirements:**

- IFA administration should be able to check all actions of a team in the system
- Only the administrator of the team is allowed to enter transactions

\*Team is a group of people consisting of players, coaches, assistant coaches, support and management.

\*Resources include stadiums, players, coaches, budget, and transactions

**Source:** Assignment document and the interview

Use case UC6: Audit budgets

**Primary actor:** IFA administration

**Stakeholders and interests:**

IFA administration: wants to increase transparency in the budget of the teams and wants to check the budget quarterly.

Teams: want to have a correct and approved budget.

**Preconditions:** Teams enter all purchases in the system. Budget policy is determined.

**Main Success Scenario:**

1. System notifies IFA administration to check budget of a team
2. IFA administration opens the budget of the team
3. IFA administration checks all transactions
4. IFA administration approves the budget in the system

5. System notifies the team that the budget is checked and approved.

**Extension**

3. If budget cannot be approved, disapprove budget and send feedback to team.

**Special Requirements:**

- Only the IFA administration is allowed to check the budget of teams.
- The budget of a team should be checked every quarter

**Source:** Assignment document and the interview

The models are attached below the interview feedback. The static model is an UML Class Diagram. All use cases are captured in one diagram. The dynamic model is captured in multiple BPMN flowcharts. All use cases have their own BPMN flowchart, except for use case 2 and 3. The interaction between these use cases can be clearly visualized in one BPMN flowchart.

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