Creating a multi-agent based system, especially for something as dynamic and complex as a soccer simulation, can be quite involved. While I can't build the entire system here, I can guide you through the basics of setting up a simple soccer simulation in NetLogo. This will include setting up the soccer field, creating two teams of agents (players), and giving them basic rules to follow (e.g., moving towards the ball, kicking the ball).

First, ensure you have NetLogo installed on your computer. Once you've done that, follow these steps to start creating your soccer simulation.

1. \*\*Setup the Environment:\*\*

Open NetLogo and create a new model. You'll first define the soccer field.

```netlogo

breed [players player]

breed [balls ball]

players-own [

team ;; either "team-a" or "team-b"

]

to setup

clear-all

create-field

create-players 11 "team-a"

create-players 11 "team-b"

create-ball

reset-ticks

end

to create-field

ask patches [

set pcolor green ;; soccer field color

]

end

```

2. \*\*Create Players:\*\*

Now, you'll define the `create-players` and `create-ball` procedures. Players will be created with a specified team attribute.

```netlogo

to create-players [number-of-players team-name]

repeat number-of-players [

create-players 1 [

set team team-name

set shape "person"

set color ifelse-value (team-name = "team-a") [red] [blue]

setxy random-xcor random-ycor

]

]

end

to create-ball

create-balls 1 [

set shape "circle"

set color black

set size 1.5

setxy 0 0 ;; start in the middle of the field

]

end

```

3. \*\*Basic Movement:\*\*

Next, implement basic player movement towards the ball and a simple rule for "kicking" the ball when a player is near it.

```netlogo

to go

move-players

tick

end

to move-players

ask players [

move-to one-of balls ;; move towards the ball

if distance one-of balls < 1 [ ;; if close to the ball, "kick" it

kick-ball

]

]

end

to kick-ball

ask one-of balls [

set heading one-of [45 135 225 315] ;; kick the ball in a random diagonal direction

move-to patch-ahead 5 ;; move the ball to a new location

]

end

```

4. \*\*Running the Simulation:\*\*

Lastly, add buttons in the NetLogo interface to run `setup` and `go`.

- For `setup`, use Action: `setup` and check off `[ ] Forever`.

- For `go`, use Action: `go` and check `[x] Forever`.

This basic setup will create a simple soccer simulation where two teams of players move towards the ball and "kick" it when close enough. However, this is a very basic example. Soccer simulations can get much more complex with strategies, player roles, more sophisticated ball handling, etc.

To enhance your simulation, consider implementing more detailed behaviors such as different roles (goalkeeper, defender, midfielder, striker), stamina, passing between players, and goal detection. NetLogo provides a powerful platform for exploring such complex interactions in multi-agent systems.