Sheffield Hallam University

UNIVERSITÉ DE ROUEN NORMANDIE

Summer School 2022

Introduction and Project Overview

Monday 9am

Dr. Joe Stone
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Morning Session

- Welcome
- Summer School Overview
- Data Sources

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Staff

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Schedule

Monday 30th May	Session Title	Room	Session Leader/s
09:00-10:45	Summer School Introduction and Project Overview	A201	Joe Stone
11:00-12:30	Identifying the Project Issue	A201/A004	Ben Strafford & Joe Stone
12:30-14:00	Lunch and Group Work	HoC Café	
14:00-16:00	Ecological Dynamics & Department of Methodology	A201	Keith Davids
16:00-18:00	Group Work	A201/A004	JS/BS/LC
18:00-Onwards	Optional drinks/dinner-Venue TBC	City Centre	

Tuesday 31st May	Session Title	Room	Session Leader
09:00-10:45	Psychology in a Department of Methodology	A201	Laura Carey
11:00-12:30	ASM & Donor Sports	A201/A004	Ben Strafford
12:30-14:00	Lunch and Group Work	HoC Café	
14:00-16:00	Intervention Designs using Non-Linear Pedaogoy	A201	Joe Stone
16:00-17:30	Group/Project Work Update	A201/A004	Joe Stone
17:30-onwards	Optional: Walk/Sport Activity (depending on the weather)	Endcliffe Park	Joe Stone

Wednesday 1st June	Session Title	Room	Session Leader
09:00-10:45	Group/Project Work	A201/A004	JS/LC
11:00-12:30			
12:30-14:00	Lunch	HoC Café	
14:00-16:00	Group Presentations	A201/A004	JS/LC/LS/JW
16:00-17:00	Optional: Social Drinks	Nursery Tavern	

School Overview

- Work in small teams to solve applied sport science problems
- Focus on Women's' Professional Football Teams

- Each group will adopt the role of the coaching and sport science team for a professional English woman's team
- Define a performance related problem and seek to develop intervention strategies using data to support your plan

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The Scenario

- Sat
  - Match Day
- Sun
  - Rest Day
- Mon
  - Previous Match Review
- Tues
  - Next Match Planning and Intervention Design
- Wed
  - Intervention Design ready for afternoon training
- Thurs
  - Implement Intervention Design
- Fri
  - Implement Intervention Design
- Sat
  - Match Day

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Key Project Milestones

- 1. Evaluate data sources
- 2. Select **ONE** key performance area to focus upon
- 3. Develop evidence on the performance area
- 4. Create a short-term intervention design using principles of Ecological Dynamics which could be implemented ready for the next fixture
- 5. Suggest strategies for longer term development of the performance area

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Groups and Teams

Team	Arsenal	Chelsea	Manchester City	Manchester United	Everton
	Group 1	Group 2	Group 3	Group 4	Group 5
Shu					
Shu					
Rouen					
Rouen					
Rouen					

Get to know your groups

- Your name
- Sport or exercise you like to play/watch
- Your main discipline area (e.g., Psychology, S&C, Performance Analysis….)
- Favourite food
- A “fun” fact about yourself

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The Project Focus

Starting point

- Dynamic systems of play in invasion sports

Attack

Defence

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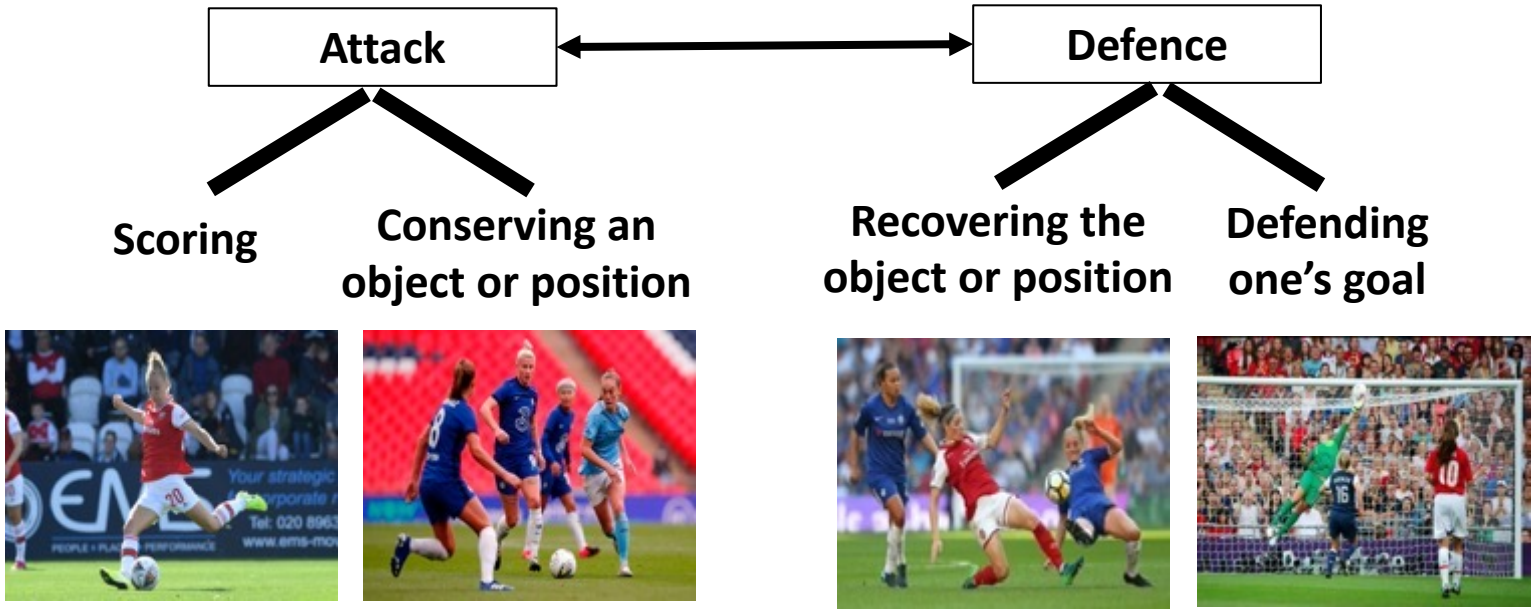
Dynamic System of Play



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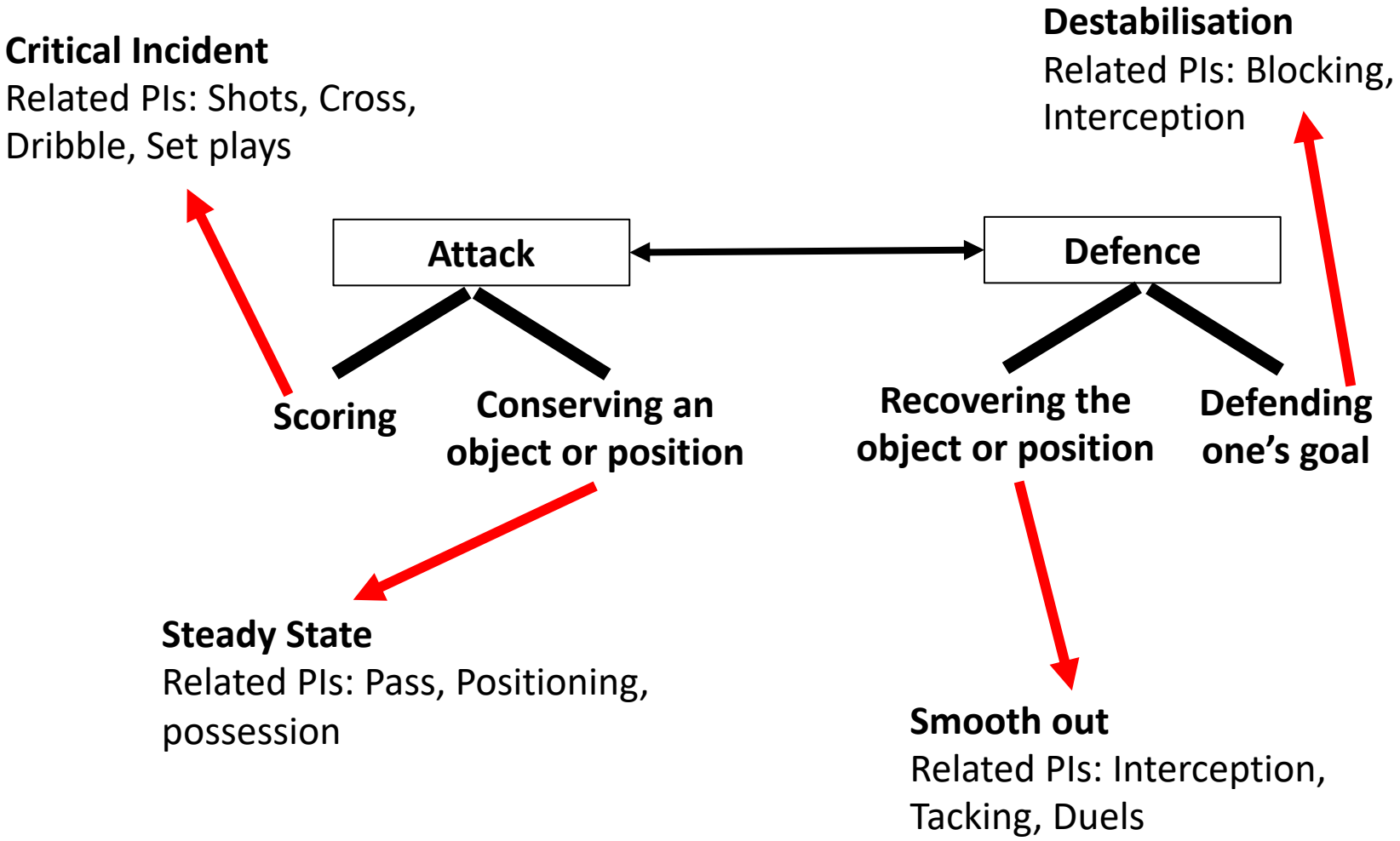
Tactical Problems: Invasion

- **Scoring:** What is the main problem for **poor conversion rate**?
- **Scoring:** What is the reason for poor **attack efficiency**?
- **Scoring:** Where is the **effective area** for creating chances?
- **Scoring:** What is the **temporal pattern** of shot attempts?
- **Conserving:** What is the best strategy for building up attacks in terms of **passing styles**?
- **Conserving**: What are the **reasons for losing the ball** possession?
- **Conserving:** What is the role of **speed in counter-attack** play after the ball is regained?
- **Recovering:** How the team **recovers the ball** to prevent goal conceding?
- **Defending:** Where is the most **vulnerable area** to concede a goal?

Examples: *Invasion sports*



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Data Sources

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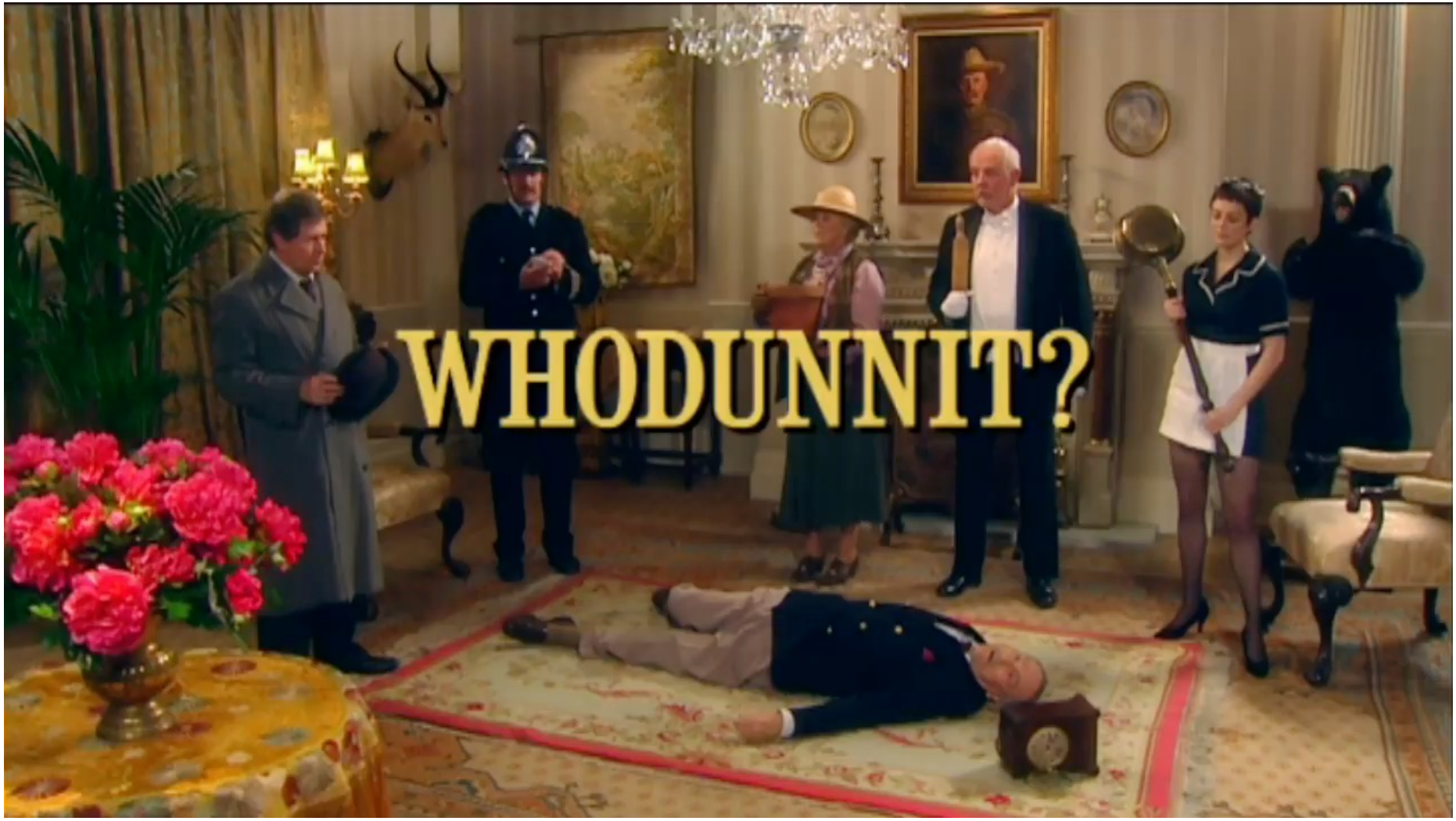
Why do we need data?



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Why use Performance Assessment?

- We can collect **data** to aid with observation of performers which **we may miss** in real time

- In your groups write down **as many reasons** as you can to why we might **assess** or **record data** during **training and/or competition**?

Why use Performance Assessment

Adapted list from Carling, Reilly and Williams (2009):

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Typical Data Sources

wyscout

Excel

R Studio®

STATSBOMB

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Data for the week

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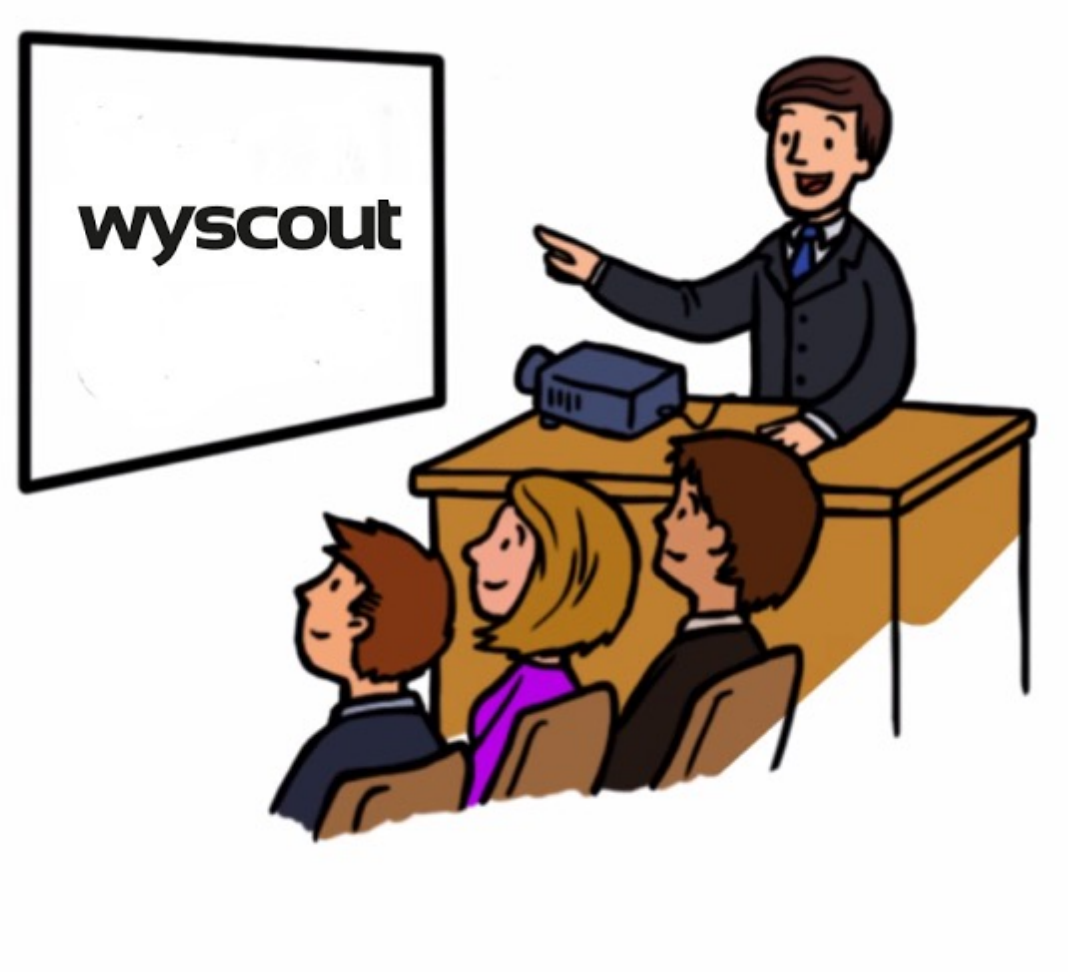
Watch the Video



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Code/Tag Data

- Pen and Paper, Excel or Nacsport

Excel

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Pre-Tagged Wyscout Data

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Pre-coded data

```
27
28  This chunk of code imports the specific competition and season of data we need. the WSL 20-21 season
29  ```{r}
30  Comp <- FreeCompetitions()
31  Women_Prem <- FreeCompetitions() %>%
32    filter(competition_id==37 & season_id==90) #this loads the specific WSL 20-21 season
33  Matches <- FreeMatches(Women_Prem)
34  StatsBombEvents <- StatsBombFreeEvents(MatchesDF = Matches, Parallel = T)
35  ```
```

28:52 (Top Level) R Markdown

Environment | History | Connections | Tutorial

Import Dataset | List

R | Global Environment

Data

Comp	40 obs. of 12 variables
Matches	131 obs. of 42 variables
StatsBombEvents	443305 obs. of 146 variables
Women_Prem	1 obs. of 12 variables

131 matches of data

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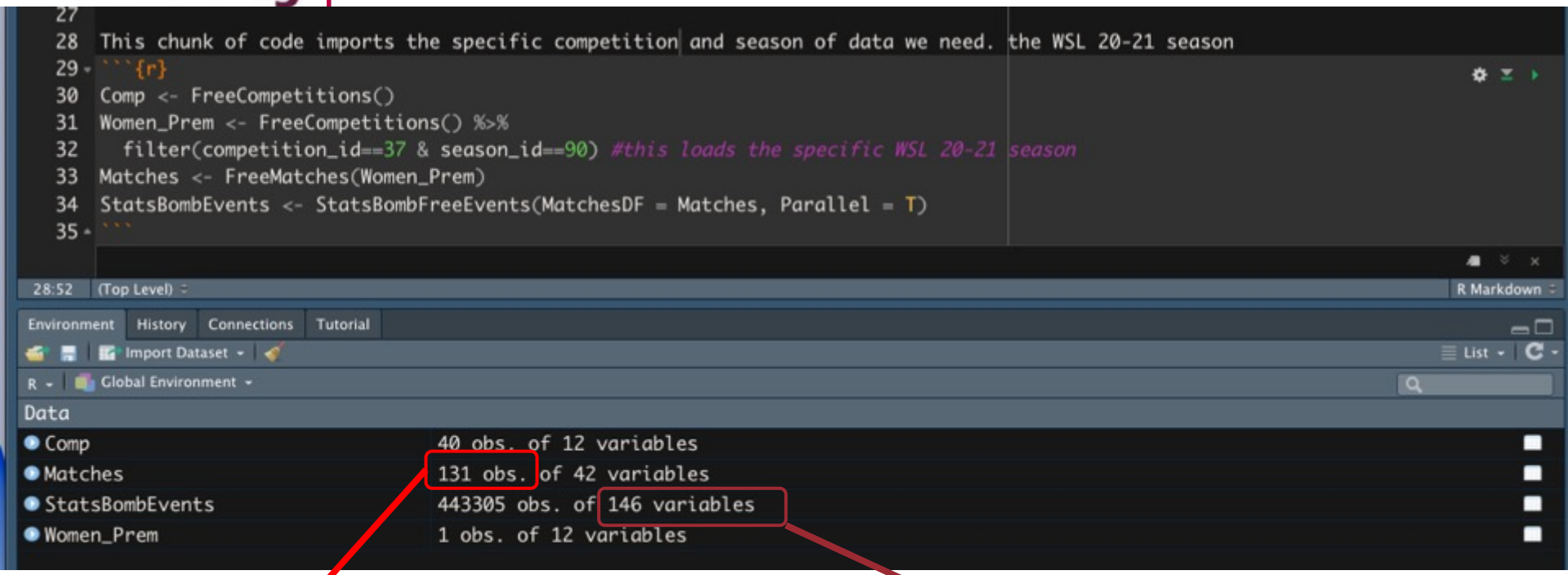
Pre-coded data



131 matches of data

146 variables of data

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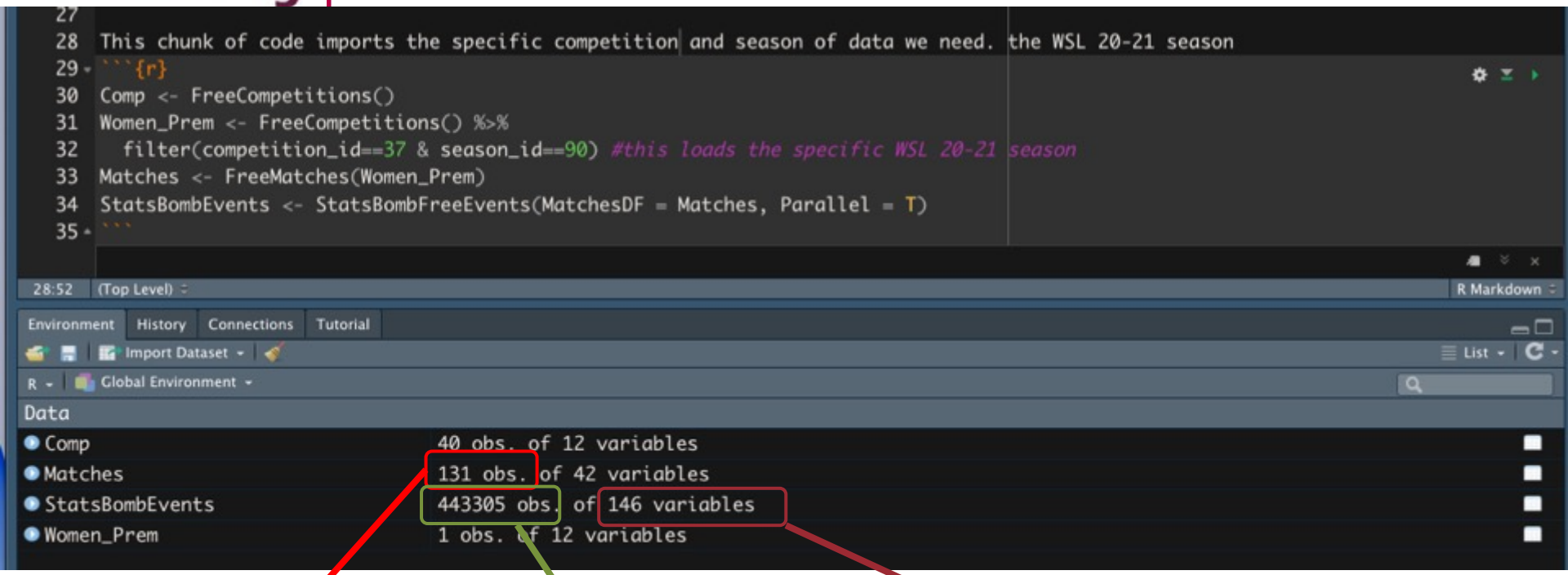
Pre-coded data



131 matches of data

146 variables of data

443,305 observation

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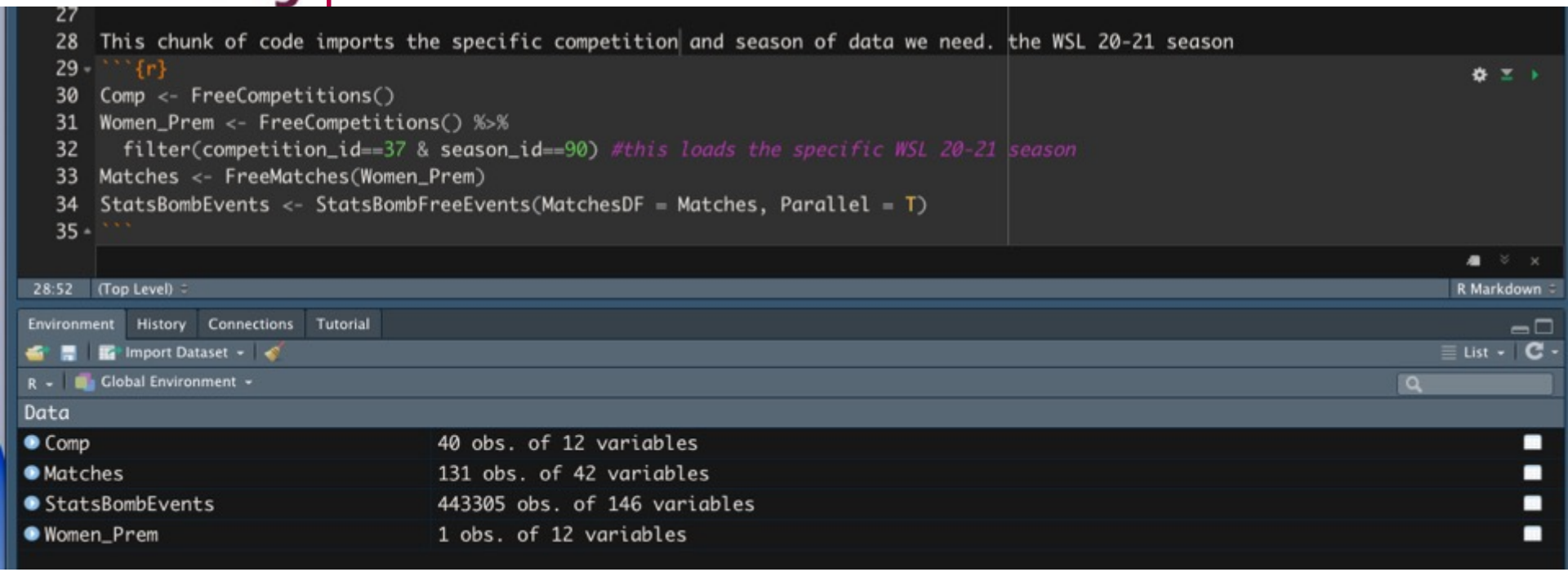
Pre-coded data



Results in **64,722,530** bits of data

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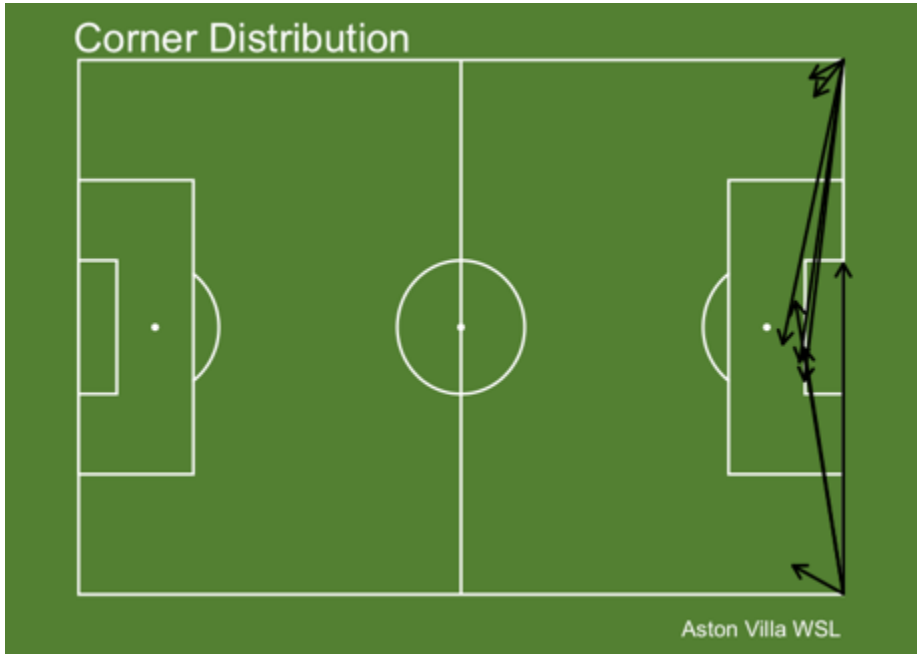
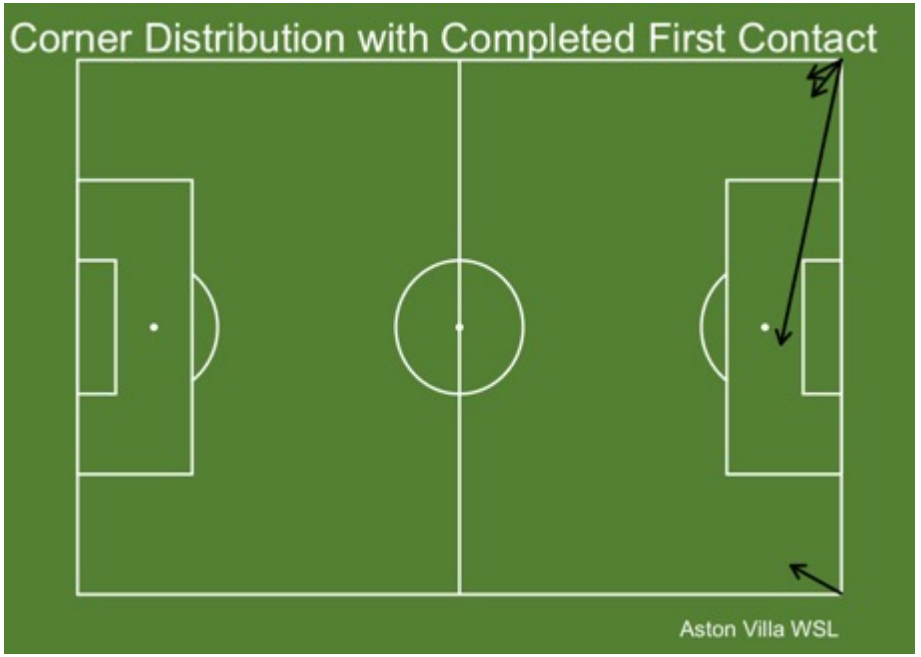
Example Output





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Is having more data better?

- **What's** and **Wherefore's**
- Data **interpretation** is **critical**
- Coaches running the data, not the data running the coaches

http://www1.skysports.com/watch/video/sports/rugby-union/9756589/sports-science-in-rugby-union

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Performance Analysis

- What data and interpretation does your group require to support issue and proposed intervention?

Which data to use?

- Time is short, like in professional sport
- Use the skillset of your group
- Plan and distribute the work
- Use the staff for advice to help if you are unsure
- You need to be ready to present on **Wednesday** afternoon

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Tasks

- 1. Map out which areas you want to start investigating
- 2. Start to examine the data sources
- 3. Define the area of interest you will investigate