

Data and Analysis in Football

Objectives

This course will develop the following areas:

- Knowledge of data processing stages and principles
- Knowledge of visualisation principles
- Intellectual ability to programme spreadsheets to generate summary information from data
- Problem solving ability to select and utilise facilities when creating systems and work-flows
- Practical ability to store, process and retrieve information
- Intellectual ability to strategically utilise decision support information
- Transferrable ability to plan and manage information systems projects in sport

Content

Introduction

Principles of data analysis

The nature of data and communicating information

Stages of data processing

Big data, the analytics era and its relevance in sport

Information in high performance sports management

Data analysis in coaching

Informing decision making

Identifying key performance indicators

Feedback and communication within the coaching process

Information streams in multi-disciplinary sports team

GPS and testing packages

Standard variables

Standard reports, dashboards and analysis features

Microsoft Excel

Using spreadsheets

Cell referencing – relative and absolute addressing

Split view

Cell formatting

Basic copying and pasting, find and replace

Time data transformations

Basic arithmetic

Basic functions for summarising data

Counting

Charts

Conditional formulae – formatting rules

The IF function

Text processing

Pivot tables

Table look-up functions

Sorting and filtering

Data quality checking and data cleaning

Checking correctness of the data through range checking

Completeness checking

Consistency checking

End user training

Reliability checking

Dashboards and Interactive interfaces

Visualisation and graph types

Developer tools in Excel

Using Tableau

Application areas

Tactical analysis

Technical effectiveness

Using big data from third party providers (Wyscout, InStat, Opta, etc) to analyse trends in football performance

Movement analysis, physical demands and work rate

Monitoring workload

Monitoring progress in training

Monitoring rehabilitation

Case study example: use of performance profiling by the English FA