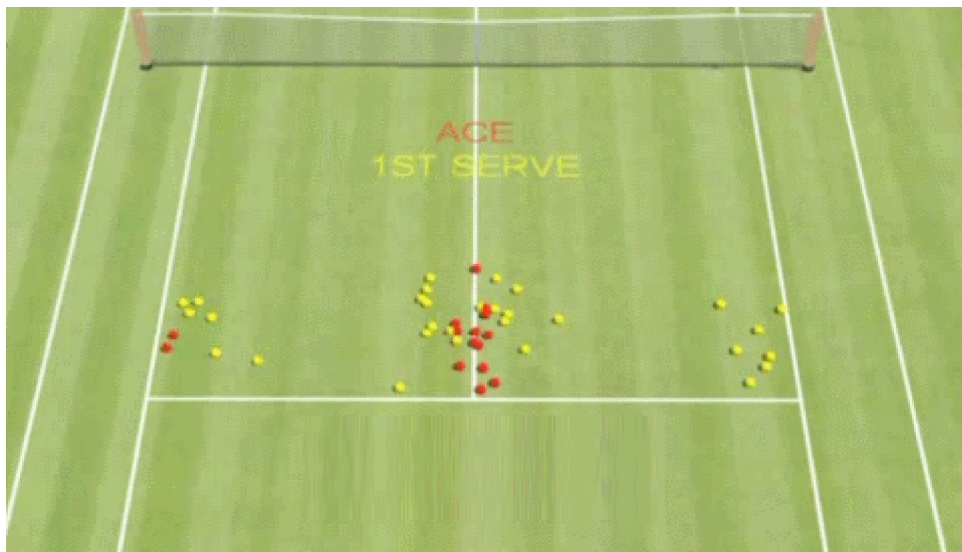


Some say every picture tells a story... and that a picture is worth a thousand words...

Below are some graphs, charts and diagrams created by sports statisticians, trainers or competitors to help them to analyse performance, inform training programmes or improve motivation.

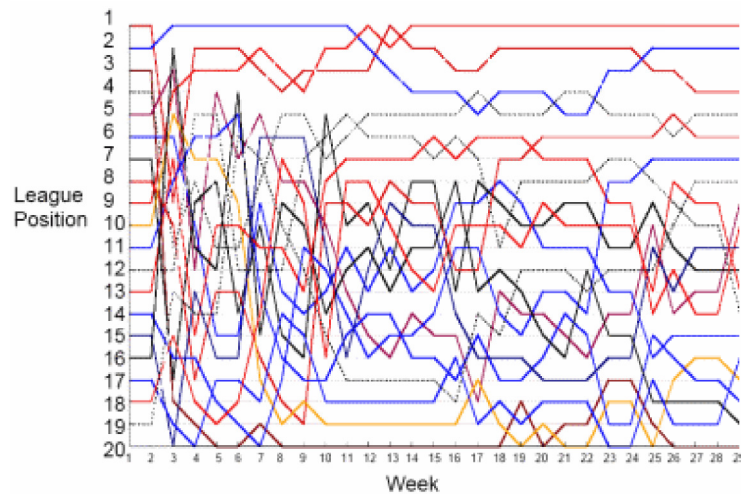
**For each diagram, we have posed some questions to consider.**

### **Scatter plot showing Federer's first serve landing points**



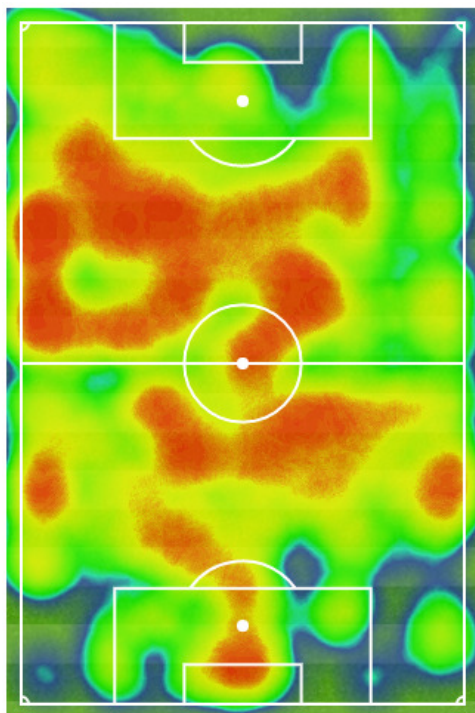
- Where did Federer score the most aces?
- Where would be the best place to stand to return the serve?
- What other information would be useful to have on this plot?
- What is the likelihood that Federer will score an ace?

## League positions of teams in a football league during a season



- Why is there so much variance in position early in the league?
- How could this chart be made clearer?
- Which team changed position the most? How could you measure this?
- Which team changed position the least?

## "Heat map" showing the position of players in one team in a football match

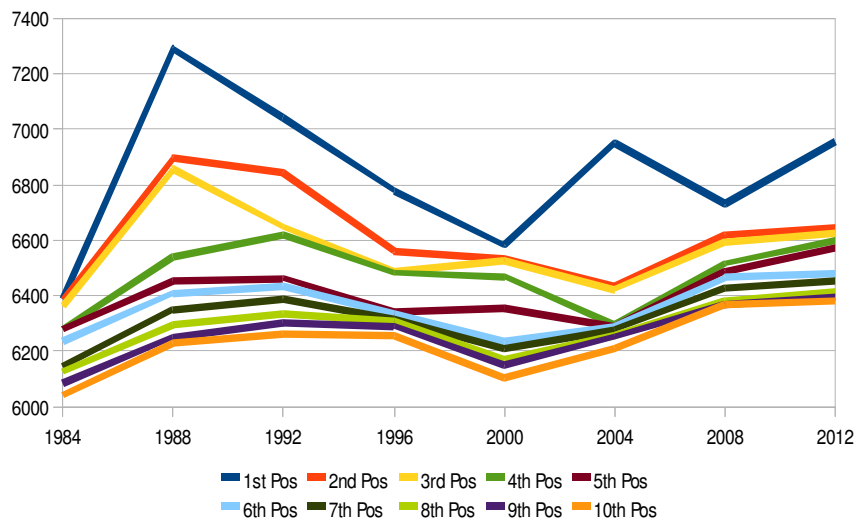


Direction of play

Image courtesy of Opta

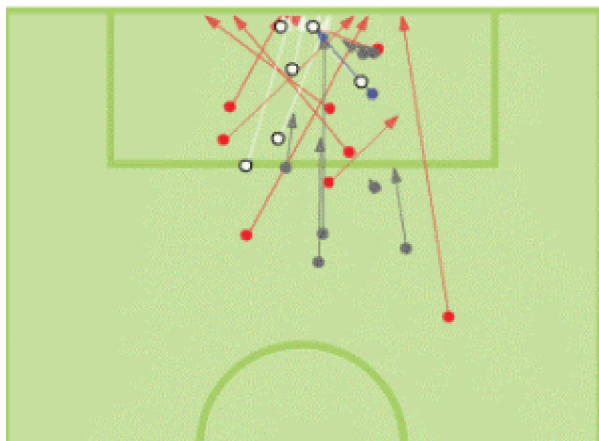
- Was this team playing up or down the pitch?
- Did this team spend more time attacking or defending?
- Where was much of the action of the game focused?
- What formation was this team using in this match?
- What strategy do you think the team was using in this game?
- What strategy do you think the opposing team might have been using?
- What do you think an ideal heat map would look like for the attacking team?

## Finishing scores of the top ten athletes in Olympic heptathlon



- Which positions tend to be grouped together, and which are spread out?
- Which year had the highest performing winner?
- Which year had the closest competition?
- Imagine you were competing in this event, what score would you need to achieve in order to win a medal?

## Shots on and off target for one team in a football match



All	22
○ Goals	6
● On target	1
● Off target	8
● Blocked	7

- How accurate would you say the attacking team was?
- How effective was the defending team in preventing goals?
- If you were attacking, which side of the goal would you aim for?
- How does the chance of scoring a goal change with the distance from the goal?