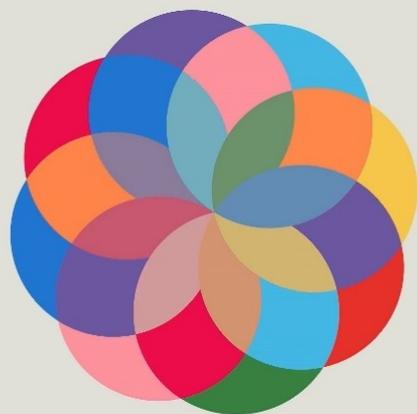
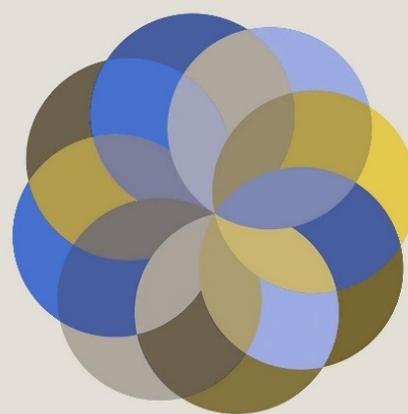


What is colour blindness?

We see colour through 3 types of cone cells in our eyes, which absorb red, green or blue light. With colour blindness (colour vision deficiency, CVD) one cone type doesn't operate normally. Most types of colour blindness involve defects in red or green cones, meaning many colour combinations can be confusing.



Normal colour vision



Colour blind simulation

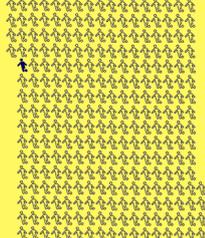
In the colour blind simulation above many colours appear differently. Care must be taken when using colours to ensure vital information is not lost.

Colour blindness is one of the world's most common inherited conditions. Statistically it affects...

1 in 12 men



1 in 200 women



Approximately 300 million people



worldwide

Why is it an issue in sport?

Almost 33 million people in Europe have some form of inherited CVD. Many are undiagnosed or unaware they are affected. For people with normal colour vision it can be hard to imagine the difficulties this can cause when every day the sports industry relies heavily upon colour for kits, signs, symbols, maps and websites. All of these sources of information can be more challenging when the difference between colours isn't obvious resulting in lost sales e.g. merchandise/tickets and there can also be commercial implications e.g. for broadcasters and kit sponsors.

What does this mean for marketing and communications?

Successfully addressing colour blindness challenges is about applying some basic principles to the way information is designed and presented. Be aware that:

- Information presented using colour alone may not be accessible for everyone
- Solutions are usually simple and common sense such as adding text, symbols, shapes and patterns
- Many colour combinations can cause confusion, not just reds and greens

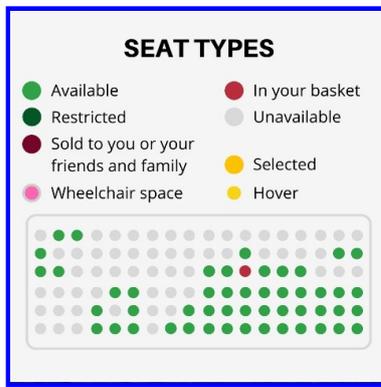


Normal colour vision

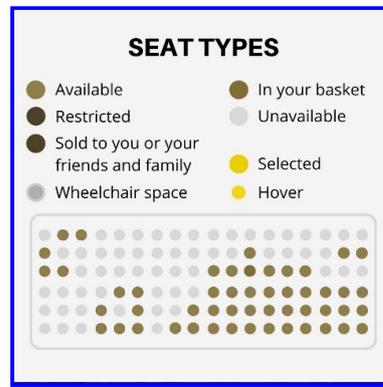


Colour blind simulation

In the simulation above some of the colours of the kit detail on the red kit 'disappear'. If sponsor's kit logos are difficult to see on your kit this could result in a commercial impact.



Normal colour vision



Colour blind simulation

If colour blind fans cannot see which seat they have selected when purchasing tickets, as shown in the simulation, this can lead to lost ticket sales.

Colour blindness is an issue for everyone

The most obvious problem in sport is distinguishing between kits. This might be a red team playing a team in black, or distinguishing between outfield and/or goalkeeping and match officials' kits. Kit clashes can have a commercial implication for your organisation, potentially leading to lost ticket sales and could even reduced sponsor and broadcaster revenue.

Other problematic circumstances for colour blind fans include seat pricing details, merchandising or in understanding information on websites and social media posts. So, whether you work in ticketing, stadium operations, communications, digital marketing or any other area of club operation, this is something you will need to be thinking about.

Websites/Marketing/Communications

No colour scheme can be completely accessible, but your chosen colour scheme e.g. Club colours or tournament brand colours can be made more accessible by ensuring that you:

- Don't use colours, only to highlight information.
- Label stadium plans etc., rather than relying on a colour-only key.
- Consider shapes, patterns, symbols etc. instead where labelling is inappropriate.
- Use effects such as italics, bold, different font sizes or underlining when using colour to emphasise important information in text.
- Check links and hover functions have good contrast and have another way of understanding them in addition to colour e.g. underlining.
- Calculate colour contrast ratios and use colourblindness simulation software to check designs are accessible.

Consider providing training to ensure everyone creating information for your organisation is aware of colour blindness and the solutions available.

For further information see the TACBIS factsheets, in particular Advice for Supporting Colour Blind Fans, Advice When Selecting Kit Colours, Clubs and Venues. For formal advice visit www.colourblindawareness.org.



What are the commercial impacts?

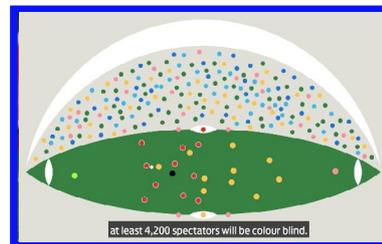
Broadcasters are beginning to realise that there can be a negative impact where fans switch off coverage of matches/events they can't follow due to poor colour combinations e.g. kit 'clashes'.

In recent years there has been a lot of media coverage of inaccessible football and rugby games, which has not only resulted in fans turning off coverage but can have a negative commercial impact upon broadcasters because they rely upon advertising revenue to win contracts to host major events. Indirectly kit clashes could impact the value of broadcasting rights if not addressed.

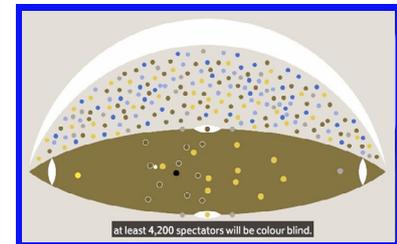
There can also be a commercial impact:

- On merchandising, if people are unable to understand the colours of items either online or in your club shop then they are unlikely to make a purchase.
- On ticket sales, if online information to highlight seats or price structure is in colour-only.
- On your sponsors, if people are unable to read information on digital pitch-side hoardings, big screens or to see logos on kits or if they receive negative backlash for sponsoring kit clash games.

Software and simulations can demonstrate the impacts meaning it's easier than ever before to make sure that information can be seen and understood by everyone.



Normal colour vision



Colour blind simulation



Normal colour vision



Colour blind simulation

The graphics images in this document are clips from the [TACBIS infographic video](#). The above image highlights that logos appear differently to people with colour blindness. Therefore care is needed when placing logos on kits and other coloured backgrounds to ensure they can be seen by everyone.