Multi-use functionality at Veltins Arena, Germany

Veltins Arena in Gelsenkirchen, Germany, is owned and operated by FC Shalke 04. This multi-use venue includes state-of-the-art technologies which enable the club to host a wide range of sports events (e.g. football, biathlon, ice hockey, boxing, American football, handball, motorsports), concerts, trade shows, corporate conferences and private events. Every year the stadium hosts 25-30 major international events and attracts more than 1.5 million people, accounting for over 20 million people since its opening in 2001.

FC Schalke 04 Arena Management GmbH, wholly owned by FC Shalke 04, manages 32 refreshment outlets and three kitchens which serve the entire stadium, including four hospitality areas.

Retractable roof

The structure of the retractable roof consists of twin sections that can be opened or closed in less than 30 minutes. When the roof is closed, a 60 centimetre gap remains that allows air to circulate but no rain to penetrate. Furthermore, two thin membrane layers stretching across the steel frame allows the interior of the stadium to receive plenty of natural light.

Roll-out pitch

The pitch sits in a concrete tray 118m long and 79 metre wide, weighing 11,000 tonnes. It takes 6-8 hours to slide it in or out of the stadium. Depending on the time of day, each operation costs between EUR 8,000 and EUR 13,000.

Info box:	
Opening year: 2001	
Construction cost: EUR 191 million	
Capacities	
78,996	Maximum capacity for concerts with centre stage
61,673	Maximum capacity for Bundesliga matches (seating and standing)
54,142	Maximum capacity for international matches
4,936	Business seats
14,500	Parking spaces split among 20 car parks

Mobile stand

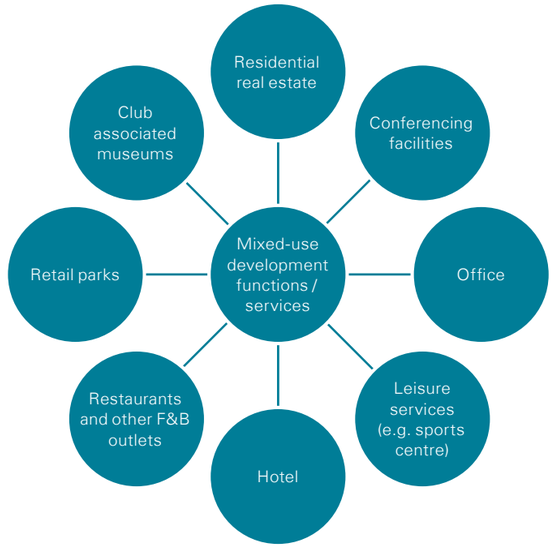
The lower tier at the southern end of the stadium contains a hinged section allowing it to be pushed back 16 metres underneath the upper tier in less than 16 minutes. The space gained allows as many as 5,000 additional spectators to enter the Arena. The stand itself is a bridge with an 85m span under which the pitch is moved in and out of the stadium.

Other key facts:

- **Through way:** for the setup and teardown of events, trucks drive through a tunnel straight into the activity area and then back out again through the tunnel opposite, thus eliminating tailbacks and time-consuming manoeuvring. These tunnels also provide wide escape routes in the event of an emergency.
- **Video cube and TV screens:** suspended on eight steel cables 25.81 metres above the centre circle, the video cube weighs 29 tonnes and incorporates four LED screens measuring 35 square metres each with a 160 degree viewing angle. An additional 367 TV screens have also been installed throughout the Arena.
- **Cashless payment system:** the arena includes a cashless payment system. The debit card can be purchased in 55 outlets inside the stadium.
- **Floodlights:** 212 floodlights are installed around the pitch area providing a maximum lighting level of 2,100 lux.

Picture: Club website

Types of mixed-use development functions



Source: KPMG

Analysis of mixed-use development potential

Mixed-use developments are becoming more prevalent as adjacent land uses are able to enjoy broader utilisation on non match days, in contrast to a stadium, which remains empty outside of event days. Increasingly stadiums are being built within mixed-use developments, often as part of urban regeneration schemes, benefitting the wider area.

The high level of awareness and footfall generated by a football stadium and other facilities within a mixed-use development may be of benefit to other development functions such as office space (with cross sale of corporate hospitality opportunities), retail (benefitting from the footfall) and even residential (with a lifestyle dimension attracting young professionals).

Stadiums alone may not be an attractive investment for private or public sponsors. Therefore the potentially higher returns secured from commercial, residential or other traditional land uses, whose revenues may be more predictable and secure, can assist in financing the capital costs associated with the stadium by diluting the risk of the project between the different components.

Although the idea of a mixed-use development may be dictated by the stakeholder's vision, the feasibility study will assess its potential and the types of functions that might be considered within the overall development project.

Annual utilisation of natural grass and synthetic turf

Technological advances in manufacturing synthetic turf has led to a rise in the number of football clubs bringing what is a popular training ground surface into the stadium, in a bid to increase the utilisation of the pitch.

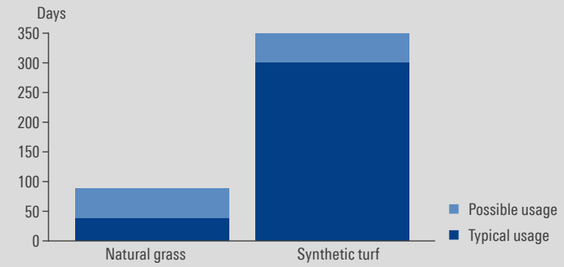
Although it is clear that synthetic turf allows a higher utilisation compared to natural grass in most cases, a change away from natural turf is dependent on the regulations of the specific league. The amount a football club will utilise their synthetic pitch will generally depend on the profile of the team and the commercial ambition of the club.

There is a common understanding that synthetic turf is typically used in regions where climatic conditions do not allow the efficient usage and maintenance of natural grass fields. However, our research demonstrates that there are synthetic pitches in stadiums of professional teams playing in countries with less severe weather conditions such as Netherlands, Ireland, France and Italy.

Whilst the capital cost of developing a new synthetic pitch may represent a large investment for a football club, the returns generated from the increased utilisation and lower maintenance cost can provide the basis for a sustainable business case. The cost of investment can range from EUR 300,000 to EUR 1 million, depending on quality standards.

Maintenance for synthetic turf is just as important as for natural grass; however, the processes are completely different. For more information concerning this topic please refer to KPMG's study on synthetic turf.

Annual utilisation of natural grass and synthetic turf



Source: KPMG's European Synthetic Turf Study 2012
Note: Data collected from football clubs of various levels across Europe.