



Connected Living



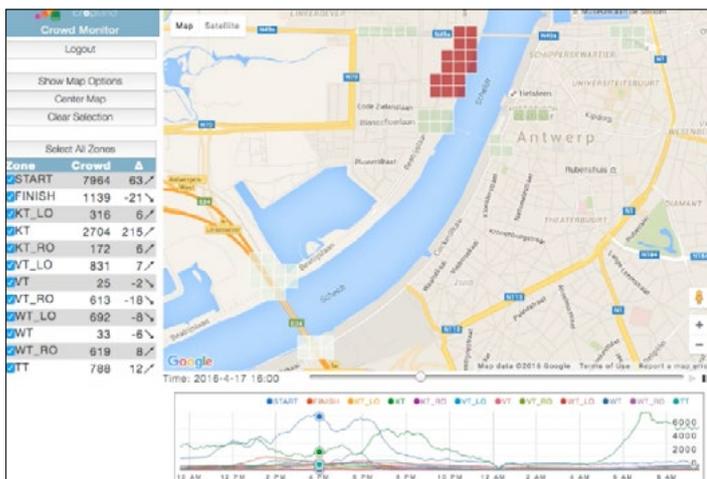
Antwerp: Crowd Management

Orange Belgium has been collaborating with local service provider Cropland and the City of Antwerp to deploy a crowd management solution for local events, such as the hosting of the Tour de France and the Tall Ships Races event.

Orange Belgium is able to provide a real-time data stream of the location of all mobile phones connected to its network within a given area. This positioning data is derived from an analysis of the connection of phones to masts across 2G, 3G and 4G networks, as well as use of a timestamp to accurately position a device. Mobile phones in the area are all given a unique, anonymous ID. This data is displayed via a crowd monitoring tool developed by Orange Belgium and Cropland for the

City of Antwerp to use for security, mobility and city marketing purposes. This dashboard shows the density of people within small squares across the given area, and allows the city to monitor the crowd in real-time. It can also be used to forecast the number of people that will be entering certain areas as people arrive at the event and move around the venue.

Orange Belgium and Cropland are also using the same solution to monitor visitor flow at fixed locations. The traditional 'Sinksenfoor' fair in Antwerp that starts each May is one of five events using the same technology to monitor people flow around the fair over a six week period to establish how effective the layout is and if there are opportunities to change it.



The Orange Belgium service has several benefits. As it relies only on network data, all devices connected to the Orange network can be tracked. The data is held by the network for a considerable time after the event, so historic data can be examined alongside real-time data to spot any significant trends.





The GSMA is working with mobile operators, governments and city councils to agree a common approach to smart city solutions that will deliver real, long-term benefits to businesses and citizens.

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