

Steigenberger Hotel

Berlin Fan Mile idDAS capacity extended to deliver cellular coverage to the entire Hotel site

COBHAM

Case Study

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Overview

The Steigenberger Hotel am Kanzleramt Berlin features 339 rooms and suites, as well as conference centre, spa and fitness, a restaurant and bar. However, the venue lacked in-building cellular coverage; an essential requirement for guests and visitors to the site.

Challenge

Radio frequency signals are not able to penetrate the Hotel's walls and windows, so an in-building solution was required. Installing a stand-alone coverage system within the hotel would be costly and disruptive, and local operators would be unlikely to support a project covering such a small area. As such, an alternative approach was required.



The Challenge

The Steigenberger Hotel Am Kanzleramt Berlin is located near the city's government quarter and Federal Chancellery building. The hotel features 339 rooms and suites, as well as several meeting rooms, a modern spa and fitness, and a restaurant and bar. Free Wi-Fi was available throughout the hotel, but cellular coverage was not available indoors.

The nature of the hotel's infrastructure and building materials used meant that external radio frequency signal could not penetrate the windows, which are made of heat-protection glass and therefore shields RF signals. To extend coverage throughout the hotel, an operator would typically need to install a base station near or within the hotel, as well as a passive or active distributed antenna system and radio heads. However, this was not a viable solution, due to the significant investment required and poor ROI for this type of installation.

Although coverage was required across the whole hotel site, it was not needed in all parts of the building at all times. Areas such as the conference venue and meeting rooms are only occupied at select times, so providing continuous, blanket cellular capacity throughout the Steigenberger would not be energy or cost-efficient.

As local operators could not extend coverage to the hotel using traditional methods at an appropriate price point, an alternative, cost-effective approach was needed.

The Solution

In 2015, Vodafone and Telefónica partnered to extend coverage and capacity to Berlin's Fan mile, using a Cobham Wireless intelligent digital distributed antenna system (idDAS). Using an idDAS meant that all base station equipment could be located at a remote site outside the city, reducing the onsite rental and maintenance requirements. The idDAS solution can extend coverage and share capacity over huge distances, by connecting to remote base stations via one single multi-mode fibre link. The deployment enables Vodafone and Telefónica customers to access seamless high-bandwidth 4G (LTE) and 3G services in the area.



The benefits of this system had already been realised, as Cobham Wireless and systems integrator SXF-Plan had earlier this year extended coverage and capacity from the Fan Mile to an area within the Sony Centre, half a kilometre away. The success of this project led to a second coverage deployment project, from the Fan Mile to the Steigenberger Hotel, approximately 2km away.

Signal was extended via a single-mode fibre link from the master unit at the Fan Mile to two intelligent digital remote units (idRU), located with the hotel. Reliable, high-bandwidth



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Thomas Schneider, Acting General Manager, Steigenberger Hotel am Kanzleramt Berlin



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Jens Neumann, Member of the Management Board, NC-Plan



vodafone

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Matthias Johannes, Manager, Business and Special Solutions, NT-Radio Access, Telefonica

3G and 4G LTE coverage is now available throughout all areas of the venue via the idDAS system, allowing Vodafone and Telefónica customers to stay connected. There are also plans to add support for Deutsche Telekom.

Cobham Wireless partnered with NC-Plan for the planning and implementation of the extension project, and again worked alongside SXF-Plan, whose team monitor the city system. This is done via an Active Element Manager (AEM), a complete management, operations and support centre which is also being used to oversee the Fan Mile and Sony Center idDAS systems.



The Benefit

Cobham Wireless' idDAS capacity-centric solution provides a cost-effective method for the rapid delivery of cellular coverage to the entire Steigenberger Hotel building. Further extending the Berlin Fan Mile through the capacity sharing project removed the need for costly investment in hardware and running costs of a standalone coverage solution.

The idDAS allows for capacity to be dynamically moved around the Steigenberger Hotel site, depending on demand. For instance, during special events capacity will be required in the meeting rooms and conference halls, to enable potentially hundreds of delegates to utilise consistent, high quality connectivity. At other times, capacity can be scaled back in those areas of the hotel which are not in use, meaning vast chunks of capacity do not remain unused, further reducing costs and energy consumption.



Following the success of the initial project to the Sony Center, this latest deployment was also built on a neutral host concept, whereby the host pays for the management and maintenance of the idDAS. This is not a common approach in Germany at present, but idDAS offers a new affordable opportunity for venues to pay for and manage their own network coverage solutions. The Berlin coverage and capacity sharing projects have highlighted the significant cost, time and energy efficiencies to be gained, and laid the groundwork for further deployments.

"Cobham Wireless delivered a cost-effective solution, with a quick and straightforward set up," commented Thomas Schneider, Acting General Manager, Steigenberger Hotel am Kanzleramt Berlin. "Guests and visitors can now enjoy cellular coverage throughout the hotel, enhancing the overall customer experience."

The solution provides an adaptable, customisable and scalable cellular and data coverage solution which benefits all parties involved in the deployment. In addition to reducing expenditure for the venue, the nature of the project also removed the requirement for Vodafone and Telefónica to invest in costly hardware; a difficult ask when the coverage requirement was for such a small area.

"The success of the Steigenberger Hotel project has opened up discussion for further extensions of the Fan Mile system, to provide Vodafone coverage to our subscribers in other venues in the area," said Enrico Schadock, Head of In-house Planning and WiFi, Vodafone. "The ease and low cost of deployment means that in the future the idDAS could be providing smart coverage for entire cities."

"We're using more mobile data than ever, and these volumes will only go up," commented Matthias Johannes, Manager, Business and Special Solutions, NT-Radio Access, Telefónica. "The approach we've taken in Berlin is the ideal solution to this challenge, offering a cost efficient means of delivering the high quality and reliability of service our subscribers have come to expect."

"The flexibility of idDAS meant that extending capacity from the Berlin Fan Mile to the Steigenberger Hotel was completed only a short while after the planning phase," said Jens Neumann, Member of the Management Board at NC-Plan. "With the ease and speed of implementation, I'd be surprised if we don't see other projects like this launching in the near future."

