

## CASE STUDY



### OVERVIEW:

With a rising demand for high-quality Wi-Fi across its hotel and conference center, Bella Center needed to upgrade its network to provide consistent connectivity to high-density environments. With a considerable amount of Wi-Fi black spots being reported by guests and conference attendees, Bella Center wanted to create the Wi-Fi of tomorrow, today.

### REQUIREMENTS:

- APs that would service the 30,000 capacity conference center and the 814-room hotel
- A solution to the previous system of installing and removing APs every time there was a conference
- A network that could be managed flexibly

### SOLUTION:

- 900 802.11ac Wave 2 wireless access points across 3 different locations in the hotel
- 340 802.11ac Wave 2 wireless access points inside the Exhibition Centre
- ZoneDirector to manage the access points

### BENEFITS:

- Became the first fully-equipped Wave 2 conference center in Europe
- Increased network capacity and allowed for more concurrent users on the Wi-Fi network

## RUCKUS DELIVERS TOMORROW'S WI-FI TODAY

### INTRODUCTION

Home to the largest airport in Scandinavia and a hub of international tourism in Northern Europe, Copenhagen is welcoming a growing number of business and leisure travellers. At the top of any 21st century jetsetter's list of travel essentials is a fast, consistent and secure Wi-Fi connection. The mobile traveller of today will accept nothing less than a strong and reliable internet connection at their fingertips that is capable of sustaining a myriad of devices, making phone calls, streaming videos, and much more. If they wish to keep up with the city's bright and innovative reputation, Copenhagen's hotels and business venues can't afford to neglect their customer's Wi-Fi demands. For the Bella Centre in Copenhagen, the ability to deliver and meet the needs of this increasing demand had become imperative.

### CHALLENGE

Bella Center Copenhagen—part of BC Hospitality Group, one of Denmark's biggest organisations in hotels, conferences, fairs and hospitality—is one of the largest conference facilities in Scandinavia. It boasts 121,800 square meters of multipurpose exhibition and congress space, with capacity for approximately 30,000 people. In spring 2011, the 814-room AC Hotel Bella Sky at Bella Center was opened. It soon became evident that Bella Center's incumbent Wi-Fi provider was unable to deliver a strong and reliable network in such a high-density environment. The current network, provided by Cisco, could only support a maximum of 7,500 concurrent users—just 37.5% of the total capacity of Bella Center. During conferences, the wireless access points at Bella Center were unable to cope with the surge in connectivity requests. Similarly, hotel users were consistently frustrated by a slow and inconsistent connection, reporting numerous black spots and unsatisfactory levels of performance. The management at Bella Center soon became conscious that an alternative solution needed to be deployed rapidly.

As the Director of Group IT at the Bella Center, Kenneth Kjøbmand's objective was clear: to build the Wi-Fi of tomorrow. He commented: "In the hospitality industry of today, Wi-Fi is just as important as running water. Our current network didn't have the capacity for the amount of users that was needed for large scale conferences. It was failing us when it was most needed and it was crucial that we found a solution that provided reliable connectivity for more concurrent users. I didn't want to have the second best Wi-Fi; I wanted to have the first. I wanted to build the Wi-Fi of tomorrow."

### SOLUTION

The Bella Center team set out to find a new Wi-Fi solution by evaluating a number of suppliers available on the market. As well as top of the range technology that would perform exceptionally in high-density environments, Bella Center wanted a Wi-Fi



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#### KENNETH KJØBMAND

Director of Group IT at the Bella Center

provider that would pay attention to its specific needs. Therefore, direct contact with engineers and a dedicated support team were among the top priorities. It was also crucial that the network have flexible management to accommodate for Bella Center's scalable and customisable environment.

After an extensive evaluation of other suppliers, including Cisco and Aerohive, Bella Center was unconvinced that they could fulfil all of its requirements and instead turned to Ruckus Wireless. It soon became clear that Ruckus could provide the exact uncompromising service, cutting-edge technology and superior performance that they were looking for. Initially, Bella Center carried out a two week proof of concept (POC) over three floors of the hotel where particular Wi-Fi problems had been reported and 12 Ruckus 802.11ac Wave 2 access points (APs) were installed in the same places the previous provider's APs had been.

Kenneth Kjøbmand remarked: "The results of the POC were astonishing. When we compared the level of performance of the Ruckus APs with those of our incumbent supplier it was immediately evident that Ruckus was far superior. When testing the particularly troublesome corner rooms of the AC Hotel Bella Sky, we found that the connection reached 300MB in the same position that the connection had struggled to reach 350-500KB before. What particularly appealed to us was Ruckus' BeamFlex technology, which ensured that these rooms that had previously been black spots now had the same high-quality connection as all other rooms." Ruckus' patented BeamFlex technology directs signal to where it is most needed optimizing connection for every user through its adaptive antenna technology that automatically adjusts for interference.

With the tech having proved itself as outstanding, Bella Center decided to install a complete Ruckus Wi-Fi solution, deploying a total of 900 of the latest standard 802.11ac Wave 2 APs across 3 different locations in the hotel according to a custom design created by Ruckus engineers. Ruckus then installed 340 APs inside the Exhibition Center, providing a permanent solution to the previous system of installing and removing APs for every event. Managing the access points is the Ruckus ZoneDirector designed for ease of use, high performance and low cost of ownership. Bella Center was the first conference center in Europe to be fully equipped with Wave 2 technology, securing its place as one of Europe's prime conference destinations.

## RESULTS AND CONCLUSION

In October 2016, Bella Center put the Ruckus Wi-Fi solution to the test during the five-day ESMO conference, the largest conference ever held in Denmark. 23,000 medical professionals attended the show and at its peak, more than 21,000 concurrent users were connected to the Wi-Fi network. Despite 33,000 unique devices connecting to the network in just one afternoon, the overall performance only used approximately 65% of the total capacity of the network. The IT helpdesk reported only 0.01% support cases, whereas this number had reached 1-1.5% with the previous Wi-Fi network. Thanks to its consistently high performing Wi-Fi network, Bella Center upheld its reputation as a stellar conference venue.

Commenting on the outstanding success of the Ruckus Wi-Fi solution, Kenneth Kjøbmand stated: "We couldn't have asked for a better quality provider. Ruckus' personable and experienced team have amazed me with their unrelenting dedication in helping us to set up and tweak the network. The Wi-Fi that Ruckus has installed will ensure that we deliver the fastest and most reliable internet connection to our customers. Thanks to Ruckus, we have tomorrow's Wi-Fi today."