



ERICSSON

SUCCESS STORY
CHINA UNICOM

KEEPING BEIJING CONNECTED

China Unicom delivers superior indoor connectivity
in one of the world's fastest-growing cities

SUPERSCALE SUCCESS

CUSTOMER PROFILE

China Unicom is a state-owned telecommunications operator in the People's Republic of China. With a market share of 22.5 percent, the company is the country's second largest wireless operator and has over 292 million subscribers.

eng.chinaunicom.com

Beijing has been the cultural, educational and economic center of China for centuries. It continues to grow rapidly, with new buildings and monuments populating the skyline on an impressive scale.

For network operators, this puts an increasing number of subscribers in a limited space. Over 21 million people live, work and socialize in the city on a daily basis – many within Beijing's commercial and residential skyscrapers, and super-sized shopping malls.

This places indoor connectivity firmly under the spotlight, particularly as people have struggled for years to get the coverage they need in high-rise buildings.

SKY-HIGH EXPECTATIONS

Performance expectations, market competition and subscriber demands are at an all-time high in one of the world's most populous cities. With global cellular data traffic expected to reach 71 ExaBytes (EB) per month by 2022¹, there is even more of a need for mobile network operators to provide the necessary infrastructure and density required to serve the marketplace – especially in underdeveloped indoor spaces.

This is particularly relevant in Beijing, with millions of residents in thousands of buildings all trying

to connect to the network at the same time. Added to this, the smartphone industry has grown enormously, so more and more people are using apps, like WeChat, and mobile devices to watch TV shows and videos on the go. Voice and data are of equal importance to the Chinese consumer, making revenue from voice calls and messaging key for operators.

China Unicom, one of the country's leading network providers, aimed to improve the indoor connectivity experience for its subscribers in Beijing. The company needed to evolve its hybrid network to support high-speed connectivity, and required an efficient, cost-effective, and easy to install solution that, above all, offered guaranteed radio service to subscribers.



¹ Ericsson Mobility Report (June, 2017)



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Nishant Batra

Head of Network Infrastructure Products, Ericsson

GROUNDBREAKING APPROACH

Building on an existing partnership with Ericsson, China Unicom selected the Ericsson Radio Dot System to address its wide range of indoor connectivity challenges with a common solution. As the industry's most high-performance indoor radio system, the Radio Dot System offers:

> Superior performance

It provides exemplary voice and data coverage and capacity in the broadest range of in-building environments, including offices, event venues and airports. This means that the solution can keep up with subscriber demands.

> Ease of deployment

It takes less than one minute to deploy and features an innovative antenna element for different kinds of users and spaces.

> Excellent service

Ericsson's end-to-end offering includes project management, on-hand expertise and cost optimization.

Nishant Batra, Head of Network Infrastructure Products at Ericsson, explains: "The mobile network landscape is changing constantly, and cities like Beijing are at the forefront of that change. The Ericsson Radio Dot System was designed to be scalable and capable of meeting both current and future needs, making it easier to address

China Unicom's growing capacity and coverage requirements."

For each of the 500 buildings selected for deployment in Beijing, Ericsson was able to provide a complete end-to-end service, including product, installation and network optimization services, to ensure 100 percent customer satisfaction.

REACHING NEW HEIGHTS

This was the first time Ericsson had provided China Unicom with an indoor connectivity system, and the Radio Dot System proved to be an innovative, flexible and cost-efficient solution. As it doesn't require a lot of cables, it was quick to deploy and integrated seamlessly within existing systems and surroundings – particularly when compared to alternative options.

Another benefit of the solution is its short time-to-market, which enabled the Ericsson team to simultaneously meet customer requirements and gain revenue. In fact, it took less than 3 months for all 500 buildings to be deployed, commissioned and optimized; even super-sized shopping malls had the system up and running in just a few days.

For China Unicom subscribers, the successful Radio Dot System deployment means that they can now enjoy uninterrupted 4G services in all 500 buildings; be it for work or leisure purposes. This is a significant result for Ericsson

and China Unicom, representing the largest number of buildings in a single city to utilize the Radio Dot System to date.

Eric Ma, Ericsson Account Manager for China Unicom reflects on the project: "We had a great team, and a common goal: to improve indoor connectivity. Our end-to-end service offering was key to helping us manage the project and optimize costs – and our team worked all the hours we had, every weekend, to ensure the deployment was a success."

Overall, Ericsson's solution established a premium indoor connectivity service in Beijing and exceeded all stakeholders' expectations.

Illustration of Radio Dot System deployment for large high rises





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Eric Ma
Account Manager for China Unicom, Ericsson



IMPROVING INDOOR CONNECTIVITY

Our ambition is to create a wireless environment where the indoor and outdoor networks perform perfectly and seamlessly together, offering the best user experience.

Such experience is achieved when all radio network layers (both macro and small cells) are working at optimum performance and as one, regardless of where users are located – be it indoor, outdoor, or on the move.

To address this need, we have developed the Ericsson Radio Dot System, which is redefining the concept of indoor small cells.

As the industry’s most cost-effective and high-performance indoor radio system, the Radio Dot System can be deployed in the broadest range of in-building environments, including offices, event venues and airports.

It provides a common solution, enabling the provision of high-level mobile broadband coverage for different kinds of users and spaces.

The system is designed for the benefit of both consumers and business users, and has many advantages for operators, IT managers, CIOs and business owners with varying indoor traffic requirements.

Additionally, the Radio Dot System’s elegant design, both in terms of product and network architecture, enables a simple deployment that is 100 percent integrated within the outdoor network.

For further information, please visit:

ericsson.com/ourportfolio/products/radio-dot-system

ericsson.com/ourportfolio/networks-products/small-cells

OVERVIEW

CUSTOMER

China Unicom

CHALLENGE

- > Consumers have high voice and data coverage expectations
- > Smartphone usage has grown rapidly in recent years
- > Beijing has many high-rise buildings with limited indoor connectivity

SOLUTION

- > 4G/LTE Ericsson Radio Dot System
- > A future-proof structure that can be fully integrated within the existing network
- > Project management, design, implementation and integration services

RESULTS

- > Superior indoor connectivity in one of the world’s fastest growing cities
- > Uninterrupted 4G/LTE services in all 500 buildings, including skyscrapers and shopping malls
- > End-to-end service benefited all key stakeholders, and optimized costs