

IN-BUILDING SOLUTIONS IN MOTION

Bringing cutting-edge mobile communications to indoor environments

How can operators who face indoor coverage issues develop a streamlined route to increased revenue, quality of service and customer satisfaction? Ericsson's tailor-made In-Building Solutions can create a win-win-win situation for operators, site owners and subscribers around the world.

Optimizing in-building networks

How many times have you witnessed mobile users in large buildings searching frantically for the best position to complete a call or download? Many operators still don't provide effective indoor coverage, making mobile communications a frustrating and time-consuming affair for subscribers. The resulting calls and messages are brief at best, limiting potential revenue for operators. The only solution is to develop optimal coverage within a building as well as the capacity to offer advanced services.

Unmatched experience

High-quality indoor coverage plays a crucial part in attracting and retaining subscribers. Ericsson is uniquely qualified, having successfully delivered over 5000 In-Building Solutions projects around the world. Each solution needs to be designed specifically for the particular building in question, to provide optimal coverage and revenue-generating services within diverse public and private environments. From airports, hotels and high-rise office blocks to sports venues, opera houses, underground transport networks and shopping malls, site-specific networks can give forward-thinking operators a competitive advantage, particularly considering the potential benefits of 3G services.

Increased revenue for all

Investment by individual companies, or groups of operators, in indoor coverage is crucial for the growth of revenue streams within large buildings. Post-solution studies of in-building activity have shown an average growth of 75 percent of new traffic on networks. This represents a massive potential market for operators to break into.

Ericsson works with all parties concerned to ensure that each turn-key solution is customized precisely for every situation.

In practice, a typical solution can pay for itself in a very short time. In environments with a large number of wireless users, payback time can be minimized as increased capacity leads directly to increased revenue. There is also a growing trend for multi-operator, multi-band solutions using single antenna systems. These multiple solutions minimize CAPEX and allow a building management company to own and

lease out telecoms infrastructure to operators on its own terms.

Tailor-made network design

Ericsson offers a one-stop-shop for all operators' needs, working to minimize the impact of equipment on the location, while



developing the best possible solution for the customer. Using a range of radio base stations and active or passive distributed antenna systems, individual solutions can be created to meet the full range of building challenges.

Ericsson works with all parties concerned to ensure that each turn-key solution is customized precisely for every situation. Starting with the chosen structure, through design and deployment itself, Ericsson's experts follow tried-and-tested processes in order to deliver a solution as unique as each challenge.



Taipei 101[®] Tower, Taipei, Taiwan

In-Building Solutions in action

The effectiveness of these solutions in practice is undeniable. There is no such thing as a typical In-Building Solutions service – a huge range of challenges have been met by Ericsson's experts on sites across the world.

Solutions come in all shapes and sizes. The Taipei Financial Center, Taiwan, also known as the 'Taipei 101' building, is the world's tallest building and now benefits from a comprehensive In-Building Solutions service that provides coverage for all mobile standards in Taiwan, from GSM and CDMA through to WCDMA. All 106 floors of the gigantic structure are covered thanks to Ericsson's ground-breaking project.

Chin-Yi Yue, President, ChungHwa Telecom Mobile Business Group, points to Ericsson's unique qualifications: "We chose Ericsson because of its leading cellular indoor coverage technology and innovative wireless products, along with its rich roll-out experience."

Time was of the essence when Ericsson delivered an indoor solution for Neutral Host Provider, SpectraSite, at the Pentagon City Mall in Virginia, USA. Calling on support from the In-Building Competence Center (ICC) in Dallas, the challenging turn-key solution was completed in time for the start of the holiday season.

In-Building Solutions also delivered a reliable quality of network for the Game City shopping mall in Botswana, creating a high traffic environment and allowing the operator, Orange Botswana, to capitalize on huge revenue growth in a short time. A radio base station situated outside of the complex,



Pentagon City Mall, Virginia, USA

combined with discretely-placed antennae throughout the interior, provided the most appropriate solution. Justin Moono, Technical Operations Manager, Orange Botswana, comments: "Today, Orange Botswana has a very good network and satisfied users."

The National Grand Theater in China is another great example of how a variety of venues can benefit from advanced services with the help of In-Building Services. High-speed internet access, seamless coverage and a smooth migration to 3G allow this cultural building to supply its visitors with cutting-edge mobile communications.

Capitalizing on 3G

The high expectations that subscribers have of 3G places a huge pressure on operators. Demand for 3G services, regardless of location and the migration from 2G networks is currently the driving force behind a large number of In-Building Solutions projects.

Many third-generation networks have been designed primarily to provide good coverage in outdoor environments. Dedicated in-building systems mean that operators can offer the same quality of

service indoors that are enjoyed on outdoor networks.

Ericsson's in-building offering provides a comprehensive solution, making it possible to install multi-band support for 2G, Wireless LAN and 3G. Consequently, operators can future-proof their services from 2G through 2.5G to 3G and advanced services can be made available to end-users, regardless of their location.

Building for success

For operators and businesses around the world there is a growing need to address in-building network requirements in order to take advantage of existing and future revenue streams. Thanks to Ericsson's In-Building Solutions, indoor coverage and the capacity to seize the future are now achievable.

Consumers can now enjoy the same quality of service indoors that is enjoyed on outdoor networks.

In a competitive telecoms market the need to offer service excellence and the latest applications, wherever users are, is greater than ever. In-Building Solutions can deliver a swift return on investment and create a competitive edge that remains sharp.