Alcatel·Lucent

AT THE SPEED OF IDEAS™

BETTER COVERAGE AND CAPACITY WHERE IT'S NEEDED MOST

USE MOBILE DEVICES ANYTIME, ANYWHERE

Where macro coverage is insufficient, metro cells significantly improve voice and data performance in city centers, airports, hotels, stadiums and shopping malls. The result is a greatly improved user experience.

77% of mobile users experience slow download speeds

70% of enterprises report poor in-building mobile service

72% of users have problems connecting to mobile networks in large stadiums

Where smartphones are used

83% on the go

50% in coffee shops

78% in a store

49% at the airport

URBAN HOTSPOTS

Metro cells' lightRadio™ directional antennas let operators focus coverage directly on hotspots. By avoiding interference with the macro, they open up many more sites for the placement of metro cells. And with integrated Wi-Fi® access points, operators can combat the capacity crunch using both licensed and unlicensed spectrum.

Metro cells benefits

- 2x capacity gain in hotspots
- Up to 70% macro offload
- Faster speeds
- No towers required
- 38% TCO savings over only macros

More calls made indoors

40% in 2003 → **58%** in 2012

INDOOR LOCATIONS

Concrete, steel and glass attenuate mobile signals making it hard for the macro network to reach indoors. But metro cells can bring the network directly into offices, event centers, hotel lobbies and malls.

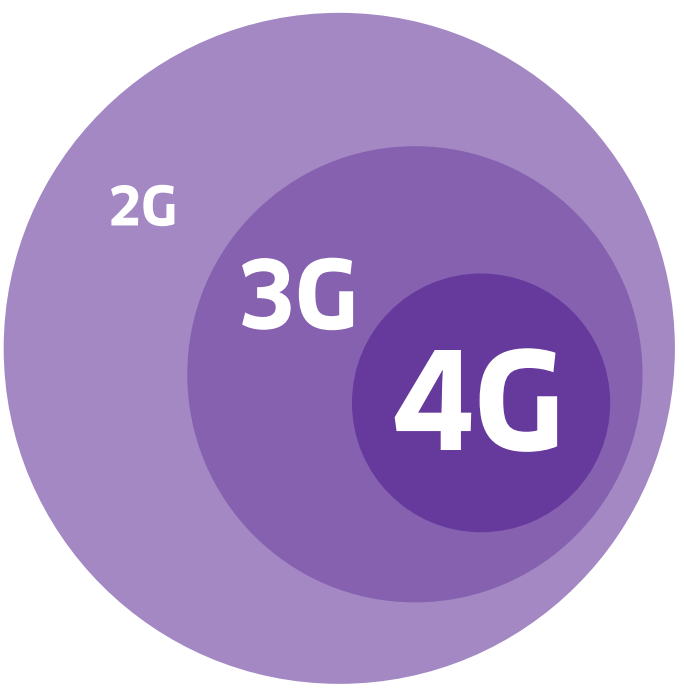
50% TCO savings over distributed antenna systems (DAS).

RURAL LOCATIONS

Many rural areas have poor or no mobile coverage. Metro cells can bring cost-effective broadband connectivity to the underserved, helping operators with universal coverage obligations. And because they are small, they won't spoil a beautiful view.

125,000,000

Around 125m European Union citizens live in rural areas.



BOOSTING CAPACITY

3G metro cells can be used to boost capacity in 2G macro areas.

4G metro cells can be used to boost capacity in 3G macro areas.

References: Pew Internet Project, Alcatel-Lucent, Coyle Media, Google Inc, J.D. Power and Associates, Eurostat