

Small Cells Presentation

Lehigh Valley Planning Commission
2019 General Assembly Meeting

Joseph Divis

Assistant Vice President

jd1437@att.com

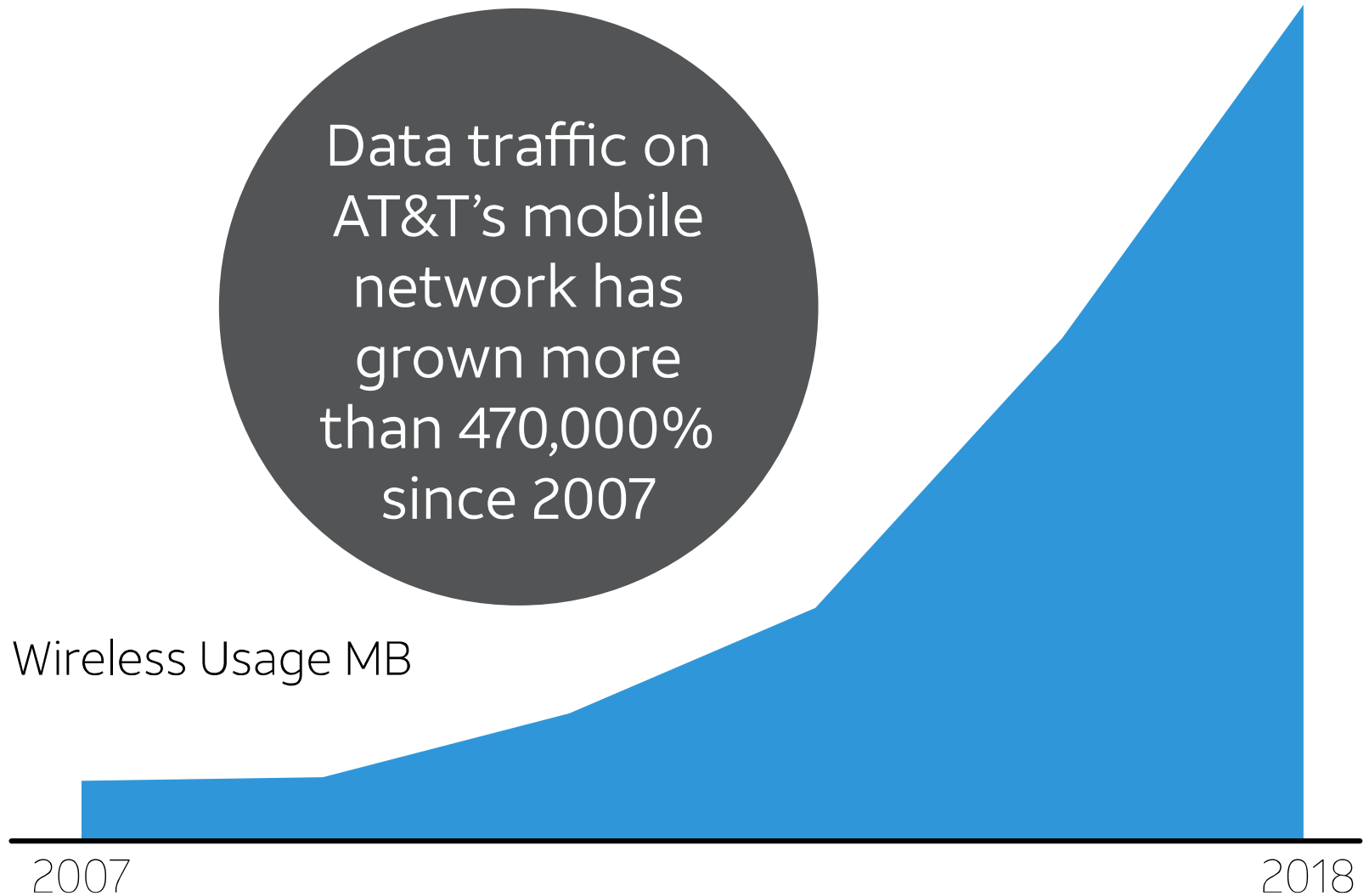
610-513-7349



What the demand looks like on AT&T's network:

Data traffic on AT&T's mobile network has grown more than 470,000% since 2007

Wireless Usage MB



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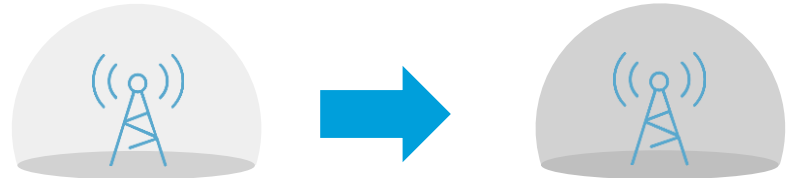


Ways to Increase Wireless Network Capacity

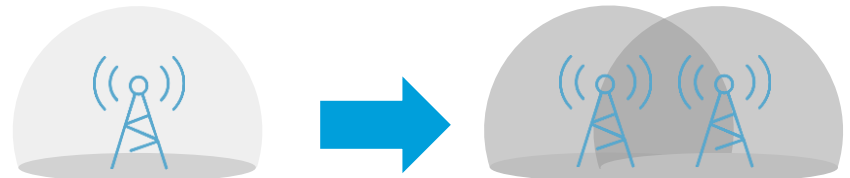
- ① *Deploy more spectrum*
- Spectrum is **not readily available**



- ② *Improve spectrum efficiency*
- Repurposing existing spectrum
 - e.g., 3G carves for LTE



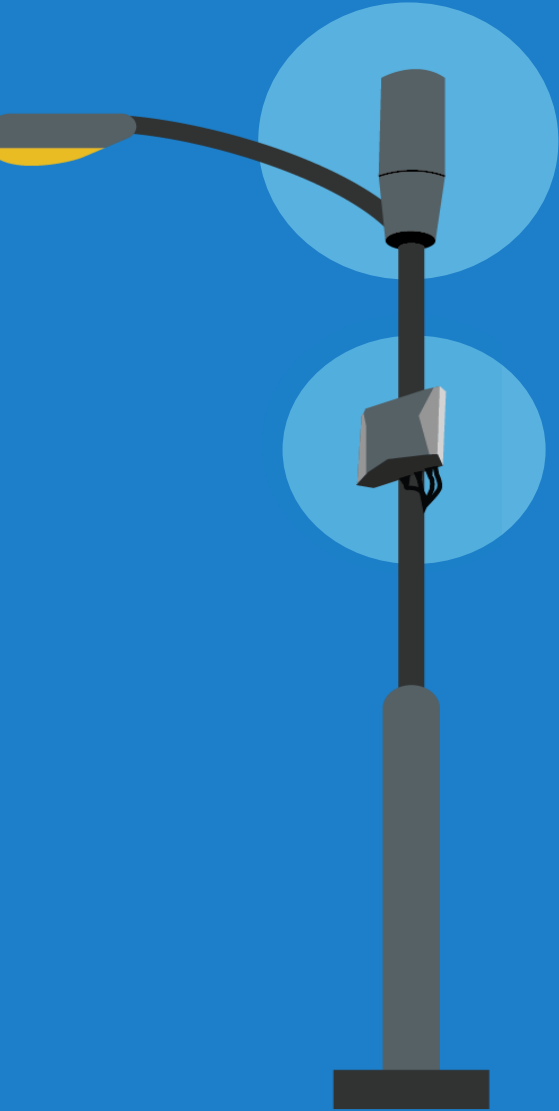
- ③ *Add more macro (cell sites) cells*
- Optimal for low concentration areas



- ④ *Add more small cells*
- Offloads surrounding macro sites



What is a Small Cell?



A new network architecture is needed

Small cells are **flexible, targeted** network solutions that cover a radius up to 1200+ feet & can be readily deployed to specific locations, including:

- Where customers are prone to experience connectivity issues
- Heavily populated areas that need more network capacity
- Areas that can't effectively be served by a traditional macro cell

This allows us to provide a better LTE experience today while also allowing us to prepare for the technologies of the future such as 5G, smart cities and new developments in the Internet of Things (IoT).

This photo depicts an example of what a small cell could look like. Actual size, shape and dimensions may vary by location.

Actual small cells











Benefits of Small Cells to Consumers and Communities

- Small cells help to lay the foundation that is needed for 5G and to bring the next generation of technologies and services to market.
- By bolstering network capacity, more efficiently using spectrum and expanding access to faster mobile internet speeds, small cells help us prepare for the technologies of the future—such as 5G, smart cities and new developments in the Internet of Things (IoT).

