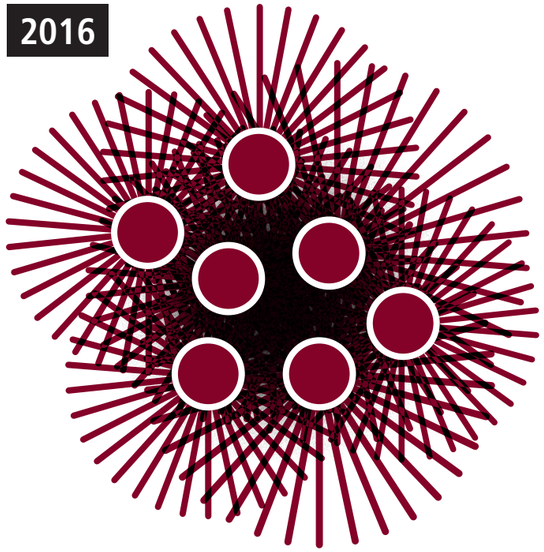
NETWORK MODERNIZATION: PRESENT & FUTURE

100% of campus wireless infrastructure has been upgraded since the start of the Network Modernization Project in 2014. **But network performance is more than hardware**. So how do we keep improving? **What's the next step?**

Core Network Complexity

2016



'Network spaghetti'

- **7 core routers** spread out across campus
- **Overly complex network** connecting core routers with central servers and infrastructure
- As network usage grew, these core routers were too **small, outdated, and often overloaded**

Increased liability of **poor network performance in some areas, especially during peak load times** (such as when students are moving between classrooms and between wireless access points).

2019

A streamlined, updated network

- **4 core routers** in key locations on campus
- **New core router hardware** - up to date, larger, and more powerful
- **Simplified, streamlined network** connecting campus

UMass Amherst Information Technology teams retired the seventh and final legacy core router on Wednesday, August 14, 2019.

Simplification of the network structure streamlines the flow of data - and along with upgraded network hardware, **significantly improves network performance, even during peak load times**.

UMassAmherst
Information Technology

Next Steps in Campus Wireless Usability

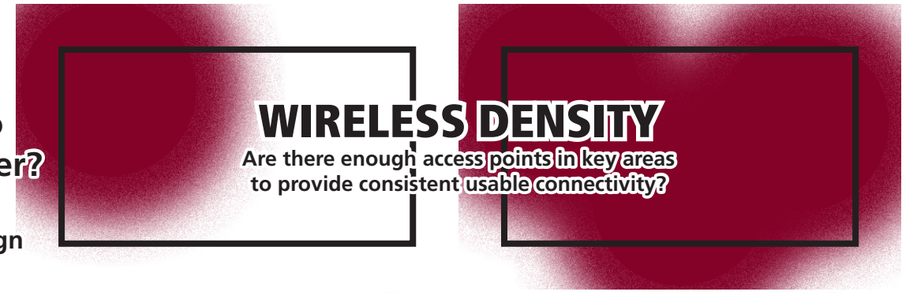
Wireless infrastructure has been upgraded - how are we working to improve usability further?

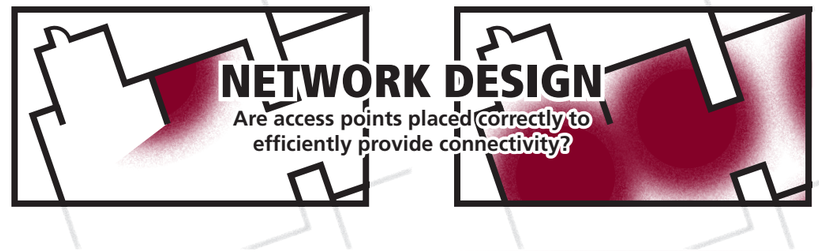
Enhanced usability through improvements in network design and wireless density are next.

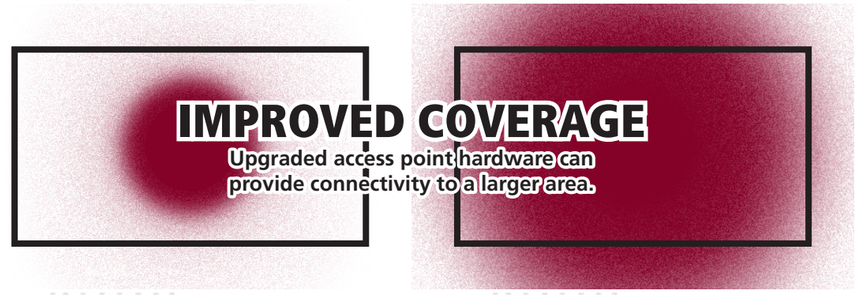
While **100% of wireless access points have been upgraded**, **improving the strategic placement of access points to guarantee great coverage in key areas** is enabling us to take campus network performance and usability even further.

UMass Amherst Information Technology is working with an outside technology firm on network design. **Over summer 2019, 100% of residential dorms were surveyed to validate wireless connectivity and usability.**

Work is in progress to complete evaluation of wireless density and usability in **classrooms as well as academic and administrative** buildings. Finally, work is in progress on **network designs for outdoor wireless** to improve network usability while walking between buildings and across campus.







updated December 2019