



## **Bradley University will leverage T-Mobile 5G Advanced Network Solutions (ANS) and Apple Higher Education to create a Digitally Connected Campus.**

### **Bradley University Digitally Connected Campus Goals:**

- Improve digital equity for Bradley University students and advance student success
  - Enrich Bradley's learning environment and create an ecosystem supportive of academic innovation
  - Improve the university's infrastructure and operations
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## **Digitally Connected Campus FAQs**

### **INITIATIVE OVERVIEW**

#### **Q: How is this initiative strategically aligned?**

- It aligns with the student-centric vision of our overall strategic plan and direction.
- It advances digital access and equity and, therefore, connects to our Diversity, Equity, and Inclusion imperative and our strategic action item (Imperative 1 and Strategic Action Item 1).
- Its academic and operational use cases tie to Boundary-Breaking Innovations (Imperative 4).
- To the extent the initiative generates revenue through attracting new students and retaining existing students, it will advance the institution's financial strength and operational excellence (Imperative 5).
- It advances student success and support, thereby connecting to Student Success and Support (Strategic Action Item 6).
- It holds the potential for building student-centric community partnerships (Strategic Action Item 8).

#### **Q: More specifically, how might this initiative advance student success?**

- During the first year of the initiative, Bradley will begin work on a "one-stop-shop" experience for the devices for students to connect with their instructors and classes, academic and co-curricular experiences, university services, and the campus.
- The partnership offers a platform that extends possibilities to connect students and offer data to help with early intervention.
- Students are leaving high school environments where many have been learning on iPads. This extends that experience into higher education.
- Students can use real-time data collected in the field to work toward solving today's real-world problems.
- Students may be able to leverage their 5G learning to improve career attractiveness in industries such as Robotics, AgTech, Telemedicine, Augmented Reality, Game Design, and Smart Cities.

- Through consultations with academic leadership, we have identified use cases across Bradley's colleges that can leverage 5G connectivity.
- T-Mobile's one-year pilot program at Motlow State of 2,000 5G-connected cell phones showed an increased retention rate of 6 percentage points (8% increase from prior year percentage) compared to students that were not provided a 5G Samsung phone.

**Q: Why is T-Mobile interested in Bradley?**

- T-Mobile is attracted to Bradley's institutional size and its Midwest location. Bradley is a scalable size and is essentially a "city within a city."
- T-Mobile's has a 5G antenna located on Bradley's campus.
- Bradley's commitment to student-centric strategy, academic innovation, and tracking outcomes associated with the initiative are appealing to T-Mobile.
- Overall, T-Mobile sees Bradley as a perfect fit in its efforts to identify a college campus that can best prove how its 5G connectivity solutions can digitally transform the student experience in higher education nationwide. In this sense, Bradley has the potential to become a true exemplar.

**Q: How might this initiative bolster Bradley's recruitment over time?**

- As the first university in the nation to establish a student-centric, digitally connected campus powered by T-Mobile's 5G Advanced Network Solutions (ANS), this initiative enables Bradley University to be distinctive and differentiated in today's hypercompetitive higher education market.
- It also positions the university to meet the expectations of a generation of students who seek a digitally enhanced learning experience. Many of these same students have participated in K-12 digital equity initiatives.

**Q: Why is Bradley pursuing this initiative and directing funds to it?**

- Bradley must show value and distinction in the market. Differentiation is necessary to justify premium pricing.
- Over time we expect this initiative to have a positive impact on the university's recruitment, retention, and financial strength.
- Through this appealing six-year partnership, T-Mobile is incurring much of the expense associated with this student-centric initiative. For instance, Bradley's initial costs during the first year are under \$1 million and will be covered by charitable contributions.
- The President and the Board of Trustees have made a commitment not to use operating funds to cover Bradley's costs for this initiative. To this end, the University has multiple options, from additional charitable contributions to grant opportunities to technology fees. Presently, these avenues are being carefully considered.

**Q: How does the Digitally Connected Campus initiative overlap with Open Educational Resource (OER) programs on campus?**

- The DCC and OER efforts on campus overlap in that they both have the potential to greatly reduce access barriers for students. OER can address financial barriers to accessing course materials, and the DCC can address technological barriers.
- The Cullom-Davis Library maintains a guide to OER for instructors looking to understand the basics of OER and where to find OER materials.

- The Library and CTCL offer mini-grants and discussion groups for those interested in learning about and adopting OER. For information about current offerings, contact Christina Norton at [cnorton@fsmail.bradley.edu](mailto:cnorton@fsmail.bradley.edu).

## DEVICE UTILIZATION AND SUPPORT

### Q: Can I use the devices and 5G data plan at home, on breaks, and/or off-campus?

- Yes. The device will connect cellularly on and off campus, subject to T-Mobile's coverage. You can review T-Mobile's coverage map [here](#). T-Mobile's 5G network covers 325 million people across 1.9 million square miles – more than AT&T and Verizon combined.
- All data usage is included in the plan, regardless of location of the use of the device. The 5G-enabled iPads not only connect to the hybrid 5G network on Bradley's campus, but also connect to any public 5G or 4G LTE network offered by T-Mobile.

### Q: Do I (or my students) still need to buy a laptop?

- The iPads are not intended to replace all other device needs on campus. The answer depends on your computing needs. Students are encouraged to visit [this](#) link to help determine whether a laptop is also needed for their course of study at Bradley University.
- While not all classes will leverage the iPads themselves as a prime learning tool, the hybrid 5G network will provide the instructors of these courses the ability to implement additional learning experiences (e.g., real-time data collection, Industrial Internet of Things (IIoT), digital twins, digital textbooks, and augmented reality experiences).

### Q: What if I already have an Apple iPad or other tablet?

- The Apple iPads provided by Bradley University include additional security and a curated suite of apps that will be beneficial to your campus experience. Bradley encourages you to take advantage of the benefits provided by the 5G unlimited data plan that is only included with this device.

### Q: Can I install personal apps or use my Apple ID on the university-provided iPad?

- Yes. Each user is allowed to use their own Apple ID.
- All uses of the products must conform to the [Bradley University IT Policies](#).

### Q: What kind of support will be available for technical issues or questions related to the iPad?

- iPads provided through the Digitally Connected Campus program come with four-year AppleCare for Enterprise (ACE) warranty and support. ACE provides 24/7 phone support for hardware as well as for iOS and Apple software, including how to use Apple apps like Notes, Keynote, and GarageBand.
- **Call Apple Support at 877-218-1190 and provide PIN 5985.** If hardware needs to be repaired, you can schedule a time with an Apple-certified technician. Damage due to misuse is not covered under AppleCare for Enterprise, and service fees may apply.

### Q: What if I forgot my passcode?

- For passcode resets and Bradley-related apps like Canvas and M365, contact the Service Desk at 309-677-2964 or email [servicedesk@bradley.edu](mailto:servicedesk@bradley.edu). **If you forget your passcode, please contact the Service Desk to open a ticket. These iPads are managed by Bradley, and you will not be able to restore your device by performing a factory reset.**

**Q: Are there any live workshops?**

- There are several [Bradley-hosted workshops](#) available, from iPad fundamentals to presenting with an iPad in the classroom to advanced features.
- [Apple-hosted workshops called “Professional Learning”](#) are hands-on sessions on a variety of topics that guide you to explore helpful resources, practice new skills, and reflect on ways Apple technology can support great learning and teaching. These are hosted by Apple Professional Learning Specialists and run for approximately 60 minutes.
- Visit the [iPad Resources page in Canvas](#) to access all workshops and online resources.

**Q: Are there online resources to help me learn on my own?**

- [Mini course on Canvas](#) features the iPad “Roadmap” and covers a broad range of topics like getting started, split screen, note-taking, Self-Service App, displaying content in the classroom, and guidance for storing files in the cloud.
- [Apple iPad badge](#) consists of mini tutorials that encourage you to explore productivity tips and useful features and takes less than 30 minutes to complete.
- [Apple Education Community](#) contains many additional resources and a learning community forum.
- Apple Professional Learning : Each month, Apple Professional learning posts free, live trainings for various usage/development : Current [sessions can be found here](#)
- [Apple Teacher](#) is a free professional program designed to support and celebrate educators using Apple products for teaching and learning; self-paced learning
- [Apple Augmented Reality](#) transforms how you work, learn, play, and connect with the world around you.
- [iPad User Guide](#)
- Visit the [iPad Resources page in Canvas](#) to access all workshops and online resources.

**Q: How can I show content from my iPad on a display or projector around campus?**

- AppleTV installation in classrooms without wireless display capabilities (like Mersive Solstice) is starting in October 2023 in classrooms in Bradley Hall, Westlake, Olin, Caterpillar Global Communications Center, Heuser, Constance, Morgan, and Markin Family Student Recreation Center. Instructions for connecting are posted inside the classrooms as AppleTVs are installed.
- If you are presenting in a room that has Mersive Solstice, you can connect from your iPad to the display wirelessly. On your iPad go to the Self Service app and download Mersive Solstice. The first time you use the app, you will need to click on the Settings icon and add “mersive.bradley.edu” to the field called Solstice Discovery Service Address. This will allow all the Solstice displays across campus to appear as options on your iPad. Choose the display you want to use and follow the instructions on your iPad to connect. You will need to be connected to the BUsecure wi-fi to connect to Mersive Solstice.

**Q: Will I be responsible for any costs associated with the university-provided iPad?**

- There are no costs associated with using the device, 5G network, or provided applications. Costs that may apply:
  - Paid apps used on the iPads (not provided by Bradley University)
  - Subscription- or fee-based services used on the iPads
  - Any additional accessories not provided by Bradley University
  - Service fees for physical repair on the iPads
  - Any damage due to misuse not covered under the AppleCare for Enterprise plan of the device
  - Failure to return or purchase the iPad upon leaving employment at Bradley University

**Q: How long can I keep the university-provided iPad?**

- You may keep your university-provided Apple iPad as long as you are employed at Bradley University.
- We are currently exploring how individuals who wish to retain iPads when they leave may have the option of purchasing the device at a reduced rate.

**Q: Am I required to incorporate the iPad in coursework?**

- Using the iPad in coursework is a personal decision, but we encourage everyone to explore and consider the benefits of incorporating the iPad and the 5G capabilities into their programs and classes.

## **5G TECHNOLOGY**

**Q: What is 5G, and how does it differ from previous wireless technologies?**

- 5G was built for high speed and reliability and low latency. All those who use this 5G network through their Connected Campus iPad will experience significantly improved connectivity and communications.
- With speeds 10 times faster than 4G, students and faculty can leverage this enhanced connectivity to engage in immersive experiences through augmented reality (AR), facilitate real-time data collection, empower the use of emerging technologies such as IoT and artificial intelligence (AI), and create an environment that cultivates interdisciplinary projects.

**Q: How will this impact Bradley's network?**

- The iPads and the 5G network will supplement Bradley's network ecosystem. The iPads will reduce the amount of data being transmitted across the campus Wi-Fi system, including student video streaming and virtual meetings being performed on the iPads' 5G connection. This will make more of Bradley's network bandwidth available to employees and students connecting their computers to Bradley's Wi-Fi.
- In-class access to the learning management system through iPads on the 5G network will reduce some collective reliance on the Wi-Fi network while students are in class.

**Q: How will the installation of 5G on campus affect my research and teaching activities?**

- The 5G network already covers the majority of the campus. Signal amplifiers are being added to academic buildings to boost coverage in basement areas where signal enhancement is needed.

**Q: Will 5G improve the internet connectivity and speed in my office or classroom?**

- Your Digitally Connected Campus iPad will have improved connectivity and speed using the 5G network from anywhere on or off campus.
- Additionally, your iPad can be used as a hotspot for connecting another device to the 5G network (with 10GB per month of hotspot data at 5G speeds). The speeds are throttled down to much slower hotspot speeds after the 10GB threshold. You will need to wait until the next month for another 10GB of 5G. However, there will not be any billing for the data overage.
- We anticipate the deployment of the 5G network and the iPads will reduce the amount of data that is transmitted across Bradley's Wi-Fi network, having a positive impact on the Wi-Fi's connectivity and speed.

**Q: Will I need to upgrade my devices to take advantage of 5G?**

- Only your Digitally Connected Campus iPad comes with the 5G cellular data network.
- You can connect to 5G by using your iPad as a hotspot (with 10GB per month of hotspot data at 5G speeds). The speeds are throttled down to much slower hotspot speeds after the 10GB threshold. You will

need to wait until the next month for another 10GB of 5G. However, there will not be any billing for the data overage.

**Q: How can I incorporate 5G technology into my teaching methods?**

- The possibilities are unlimited. Faculty and staff will have great latitude in exploring how this technology can be leveraged to advance educational outcomes within and beyond the classroom at Bradley. As many as 30 use cases have been identified through consultations with college leadership teams. Some examples include the following:
  - Advancing Nursing simulation program
  - Advancing Interactive Media offerings
  - Industrial IoT solutions and digital twins
  - Sensor-based Data Capture and Analysis
  - Bradley-OSF Innovation for Health projects
  - Integration of online students with on-campus experiences
  - Capstone project collaboration with T-Mobile
  - Possible textbook savings through the use of open educational resources

**Q: Are there any health concerns associated with 5G technology?**

- 5G uses radiofrequency electromagnetic fields (RF-EMF) which is regulated by entities such as the Federal Communications Commission (FCC) and the International Commission on Non-Ionizing Radiation Protection (ICNIRP) for operating within set safety limits.
- Governments and regulatory bodies continuously monitor and enforce these standards to ensure 5G infrastructure and devices adhere to the safety guidelines in order to safeguard public health. Organizations such as the World Health Organization (WHO) and scientific advisory bodies review and assess available evidence to provide guidance and ensure public safety.
- [WHO](#) reported no adverse health effect has been causally linked with exposure to wireless technologies, including 5G.

**Q: What are the long-term plans for expanding and maintaining the 5G infrastructure on campus?**

- The new ubiquitous connectivity capabilities provided by T-Mobile will allow us to reimagine how connectivity contributes to our campus experience and will likely reduce costs associated with a Wi-Fi upgrade on campus. This initiative is not meant to replace planned Wi-Fi upgrades.
- Data and feedback gathered during the early stages of the initiative will provide insights to help determine our future path.