

GAME-CHANGER FOR AV MANAGEMENT

# Michigan Technological University

## Where Rugged Wilderness Meets Cutting-Edge Classroom Technology

 Houghton, MI

Located in the rugged wilderness of Michigan's Upper Peninsula, [Michigan Technological University](#) (MTU) is a globally recognized institution that overlooks the Keweenaw Waterway. But it's not just the picturesque landscape that sets this University apart. It's the cutting-edge technology that permeates every aspect of campus life. This is evident as the University undertook a multi-year project to renovate classrooms to enhance the teaching and learning experience. Among the key elements required for this project was an advanced yet user-friendly audio, video, and control (AV&C) system. After thoroughly evaluating a proof of concept, the University opted for the [Q-SYS Platform](#).



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**David Chard**

Director, Media Technology Services, MTU

# Challenges

## Streamlining Classroom AV

Spearheading the classroom renovations was the on-campus [Media Technology Services](#) department which supports audio-visual systems across the entire university. With a team of only six, their main challenge is dealing with disparate systems that lack user-friendly controls, requiring ongoing attention from engineers. “In these new classrooms, we needed a single software solution that was easy to use but also had the flexibility and scalability to expand,” explained David Chard, Director of Media Technology Services. “We’ve had previous success using the Q-SYS Platform as the audio DSP in our three athletic venues, specifically with Core-to-Core streaming. As a result, we were confident in using the Q-SYS Platform for audio, video, and control in these new classrooms.”



# Solutions

## Q-SYS Enhances Classrooms

The initial phase of the multi-year project involved renovating five chemical science classrooms. Each classroom utilizes the [Q-SYS NV-32-H](#) running in Core Mode, allowing for seamless integration of various audio and video components within the room. A [Q-SYS NC Series PTZ Conference Camera](#) is installed in the back of the room to capture the instructor. In addition to video capture, audio was a crucial aspect of these classrooms. To ensure effective audio capture, an [NM-T1 Tabletop Beamforming Microphone](#) was positioned on the lectern. This microphone utilizes advanced beamforming technology, allowing it to focus on the speaker's voice while minimizing background noise. This ensured clear and intelligible audio for the instructor's lectures.

## Smooth Video Experience for Educators

"Our previous system's PTZ Cameras were slow and laggy during video adjustments and previews, causing significant challenges. However, since adding the Q-SYS cameras, things have completely changed for us," stated Chard. "The responsiveness of the Q-SYS cameras has eliminated the frustration we used to face. Additionally, we've added the ACPR ([Automatic Camera Preset Recall](#)) plugin which is compatible with the [Shure MXA920](#) microphone installed on the ceiling, allowing us to trigger predefined camera positions for optimal viewing. Implementing ACPR was relatively straightforward as our Shure beamforming ceiling microphone already had well-established lobes for aiming each preset. These features are a significant win for us, and we are excited about the future in our classrooms."

## Game-Changing Results with Q-SYS Reflect

Implementing [Q-SYS Reflect Enterprise Manager](#) has been a game-changer for Michigan Technical University (MTU). One major advantage was the ability to update the firmware on their Q-SYS Core via Enterprise Manager. The timing of this firmware update was critical for MTU as it was necessary to support their University Welcome event. Despite initial hesitations due to past issues with other systems, MTU was able to successfully update the Core's firmware, guaranteeing a smooth operation for their event. Moreover, with Enterprise Manager, they can remotely access and resolve issues within their Q-SYS system, minimizing the impact of downtime and reducing the necessity for on-site assistance. This capability has significantly improved their system management and provides added convenience for their IT team.

## Small University, Big AV

Having established a strong partnership, the MTU team is set to transition roughly one hundred rooms, lecture halls and labs across campus to Q-SYS as part of their multi-year project. Chard expressed his enthusiasm about Q-SYS. "We are a smaller university located four hours away from the nearest integrator, so we handle everything ourselves. We design our classrooms, select and evaluate hardware, program it, and wire it. We are a one hundred percent in-house shop, acting as the integrator and providing support. This is why it's crucial for us to have a solution like Q-SYS, and the program management and technical support Q-SYS Reflect Enterprise Manager provides are invaluable. Since using Enterprise Manager, we have already been able to identify and address errors and warnings that we would have otherwise missed. Q-SYS has helped us achieve many of our goals."



Q-SYS is a globally recognized manufacturer of audio, video and control (AV&C) solutions for huddle rooms to stadiums—and everything in between. Our systems make it easy for your team to design and integrate flexible, scalable solutions and deliver the native IT integration and standards-based technology your customers expect.

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