

Crafting a Contemporary Classroom: NEC Projectors Create 21st-Century Education Spaces for Illinois School District

The Challenge:

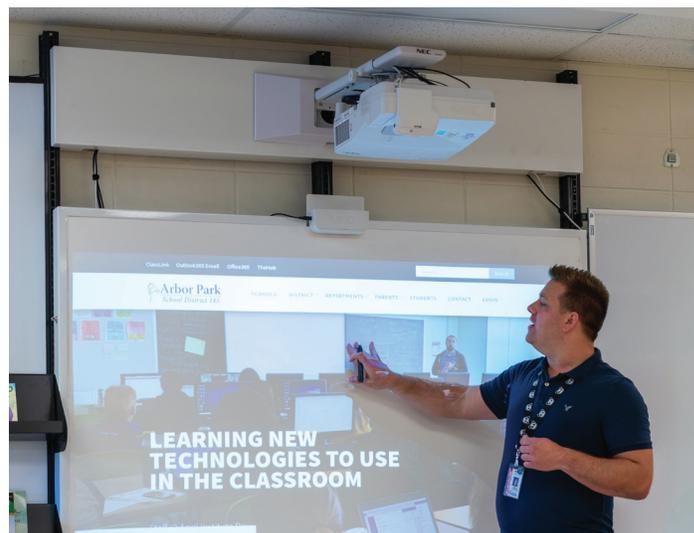
Replace aging and outdated projector technology across an entire school district in the southwest suburbs of Chicago.

Solution:

90 [NEC NP-UM351W 3,500-lumen widescreen ultra-short throw projectors](#) and 2 [NP-ME361, 3,600-lumen portable projectors](#), both for educational and classroom use across four schools.

Result:

Immersive, modern classrooms that facilitate engaged student learning and active teaching.



In the 21st century, education and technology are intrinsically intertwined, and for good reason; immersing students in technology not only prepares them for life in the modern world, but also can help them stay engaged and activate their desire to learn.

So when a Chicago-area school district's new chief technology officer took the helm and realized how behind the curve the district was, he made upgrading old technologies and implementing new ones his team's mission.

The Challenge

Arbor Park School District (APSD) is located in Chicago's southwestern suburbs, with four schools serving students in kindergarten through eighth grade. Between 2010 and 2012, APSD had installed interactive whiteboards in many classrooms that let teachers project images from computers, as well as allow both students and teachers to interact with the board via touch or stylus – but the boards were aging past their useful life.

"All four buildings in the district had four different models of these boards, which tend to last five to seven years, and [ours were much older]," said David Termunde, chief technology officer (CTO) for APSD. "Not only were they out of warranty, but the projectors were getting too dim; we were having issues with touch and the stylus; and some of the bulbs had stopped working. Plus, they were cumbersome, size-wise."

These boards put the district behind about a decade, technology-wise, according to Termunde – so when he accepted the role as CTO in July 2017, he began implementing changes to correct this the very next month.





These changes included bringing on new IT staff and rebranding the IT department as the [Arbor Park PandaTech team](#), with the moniker coming from their asset-tracking and help desk-ticketing software, AssetPanda.

"We're very student- and teacher-focused, and like IT departments for any school district, we want to provide a high level of service, but we want to have fun while doing it," Termunde said. "We even have full-body panda outfits, and panda polo shirts, and the kids actually know us as 'the Pandas' and know to ask the 'Pandas' for [tech] help."

The Pandas also defined a vision for their department: ensuring all students who graduate from APSD are fluent in all technology platforms by the eighth grade – and that required bringing the district up to speed on the latest classroom technologies. With this mission in mind, Termunde began investigating options for projector/whiteboard upgrades.

Searching for New Technology

Termunde evaluated a number of technology options by attending industry conferences, visiting other schools to learn what was working for them (and what wasn't), and testing several types of projectors and interactive whiteboards. He eventually made a decision on a manufacturer, NEC Display Solutions, and chose as the main replacement technology [NEC NP-UM351W 3,500-lumen widescreen ultra-short throw projectors](#).

"I saw a lot of 'TV-style' interactive boards, but I felt like the kids would benefit from having a larger screen, so that's why I chose the NEC ultra-short-throws," he said.

There were a number of factors that drew Termunde to the NEC projectors.

"We do 90 percent of our installations and jobs in house and don't outsource much, so the ease of installation was a big plus," he said. "My team was able to take on the task

themselves. Plus, [our NEC sales rep] allowed us to test a variety of displays and projectors before we made a decision. Other vendors either took too long [to get back to us], or weren't willing to provide full working demos."

Termunde also liked the NaViSet Administrator network-based control and asset management system for the projectors.

"Being able to view multiple projectors from a central console via NaViSet allows us to see ahead of time if a bulb is about to go out, or if a projector needs maintenance for any reason, before the teacher discovers there is a problem," he said. "And that software was available free, with no need for a license."

Going with NEC also made sense for APSD's budget for two reasons, Termunde said.

"In a school district, you're always working within certain budget limitations, and using the NEC technology allowed us to budget upgrades or installations for every single classroom, whereas with other brands, I wouldn't be able to do them all," he said. "This way, every teacher is able to get brand-new technology. Plus, with the free bulbs, that means we don't have an ongoing cost; it's a one-time cost that will sustain itself for the next seven or so years. We can set it and forget it – that's the ideal."

Termunde added that when he spoke to other school districts that use other projector manufacturers, he never "got a good answer about why they stuck with them."

"They just said, 'That's what we've always done,' and the status quo doesn't work for me," he said. "I want to do things differently from what everyone else is doing, so we're ahead of the curve."

With the technology decision made, Termunde and his team began planning the installations.

The Installation

The first installation began in July 2018. With four schools across the district to upgrade, Termunde and his team implemented a lifecycle management plan: replacing the oldest technology first, and working their way through the district until every classroom has a new NEC projector.

The installations for the two completed schools have been a little different from each other, Termunde said. The first school, Scarlet Oak, was a full classroom revamp. Termunde and his team stripped the classroom of chalkboards and interactive whiteboards, painted the walls, and then installed a proprietary system they created: the Panda Wall.

"It's a customizable system that includes shelves for books and bulletin boards, as well as a space for the whiteboard projector screen, and we even created custom mounts for the NEC projector," he said. "So after we installed this system, we put the NEC mount [that came with the kit] on our custom mount, and installed the projector itself in 10 minutes."



Termunde added that the focus wasn't just to install technology; the APSD tech department takes a holistic approach to the spaces they redesign, down to paint colors, carpet and furniture, to ensure each learning space is functional, attractive and modern.

"All the old stuff like chalkboards – it just doesn't look 21st century, and we don't want to bring 21st-century technology into dated spaces," he said. "So in some of the older buildings, we're also working on the classrooms themselves, adding things like new carpeting and bright colors, to make learning spaces that are nice and new, and engaging for the kids."

With all 17 classrooms completed in time for the 2018 school year, Scarlet Oak was outfitted with 17 [NEC NP-UM351W 3,500-lumen widescreen ultra-short throw projectors](#), plus the kits with mount, touch module and stylus, and one [NP-ME361, 3,600-lumen portable projector](#).

In summer 2019, the Pandas began working on another school, Morton Gingerwood, which created a new challenge.

"This building is very old, and the walls are not brick; they're a mixture of materials that make it tough to mount anything to them," Termunde said. "So in this case, it was easier, faster and more affordable to retrofit."

Termunde and his team used a universal adapter kit to replace the older projectors with 16 brand-new [NEC NP-UM351W 3,500-lumen widescreen ultra-short throw projectors](#), but kept

the existing whiteboards that were already mounted in place. They added one [NP-ME361, 3,600-lumen portable projector](#) to Morton Gingerwood as well.

Termunde noted that any time they had a question during installation, NEC was there to help.

"NEC customer service has been top-notch," he said. "Especially because we're doing the installations in-house, it's not as familiar, and their team has answered all of our questions." By working on a different school each summer, the Pandas will have cycled out all older equipment and replaced it with new equipment by 2021.

The Results

With two schools completed and two more on the agenda, APSD is quickly moving into the 21st century.

"Before, our district was behind, technology-wise; in last two years, we've jumped almost a decade in regard to equipment, processes and a new focus on tech," Termunde said. "The district and board have really let us fly and get us the tech we need, because they know it impacts curriculum and everything we do nowadays."

Termunde added that Scarlet Oak and Morton Gingerwood teachers have been happy with the new NEC projectors.

"Their biggest compliment is that they're noticeably brighter," he said. "A projector that is eight years old and still works, but is too dark for anyone to see anything, doesn't help a teacher convey their message, and that impacts how the kids learn."

Teachers use a Microsoft wireless streaming adaptor plugged into the NEC projectors, connected via Bluetooth to their Microsoft Surface Pros.

"Teachers are no longer tethered to the interactive whiteboards via three cables, like they were with the old technology, and they can walk around the room to engage students," Termunde said. "We want kids to be active learners, and teacher to be active teachers, and now we have the technology to support that."

Termunde's advice to other IT departments in education who are looking to fit tech upgrades into a budget is to work with partners who can track down a good deal.

"Do your research and find a reseller who is willing to work with you to find the best pricing from distributors," he said. "Tell your reseller your overall plan, and see if they can make it happen."

The Pandas have a number of projects on their agenda, including building out infrastructure to support the district's schools for the next 10 to 15 years, and implementing a standardized 1:1 program in which each student has their own Microsoft Surface Go – a small, lightweight, cloud-based laptop.

"Without decent infrastructure, it's chaos, so our goal is to eliminate that chaos and provide stability," Termunde said. "Everything in a school is tied to technology, whether for lesson presentation, state testing, and even the lights and HVAC. Not having good technology these days is like not having electricity. It's that critical."

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