



CASE STUDY

Hernando High School: their journey to a smart school

SIEMENS

Abstract

Hernando, a suburb of Memphis located in northwest Mississippi in DeSoto County – named after Spanish conquistador Hernando DeSoto – is one of the fastest-growing countiesⁱ in the United States, having added more than 20,000 people to its population in recent years. And today, DeSoto County Schools serve more than 34,000 students, making it the largest school district in the state. As enrollment increased, district leaders continually added classroom space.

Eventually, however, they simply ran out of room to expand and found themselves operating at near capacity across 44 district buildings. For Hernando High School in particular, the school board recognized this as a unique opportunity to rethink what a modern learning environment could be while adding more modern learning for more students, educators, and staff.

Superintendent of Education Cory Uselton explains that the investment had to extend well beyond opening day. “We haven’t built a high school in DeSoto County since 2009,” he explains. “Hernando High School will be a blueprint for what the other high schools in DeSoto County can be for the next few decades, so we wanted to make sure that we had the best technology that we possibly could.”

From the earliest planning stages, Siemens played a key role in shaping that vision by providing the strategy to create the digital foundation and smart technology to support infrastructure for the school to operate as a truly integrated, smart school. Working alongside Siemens Partner EJK Automation, a master system integrator that has served the district for 15 years, Siemens helped develop a roadmap for unifying HVAC, lighting, and room controls. Using Desigo Optic as the common platform, the district could manage these systems as a connected, data-driven environment rather than as separate, siloed technologies.

DeSoto County Schools | By the Numbers

- 34,000+ students served
- 4,200+ educators and staff
- 44 district buildings
- Mississippi's largest school district



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Cory Uselton
Superintendent of Education
DeSoto County Schools



From a new school to a **smart school**

That vision helped shape Hernando High School into an integrated, future-ready school. Duane Case, Hernando High School's Principal, emphasizes the importance of creating a learning and teaching environment where students can "earn a great education, win at everything they do, and have a great high school experience."

And so, rather than treating individual building technologies as isolated systems, the district pursued an integrated approach designed around openness, transparency, and long-term flexibility. Along the way, pairing EJK Automation's local engineering and integration expertise with Siemens global strength and deep bench of technologies and technical resources.

Siemens provided the digital foundation architecture, along with the framework for automation, that made integration possible while helping to ensure flexibility for future technology and expansion. Through solutions such as Desigo Optic and Total Room Automation (TRA), all building systems are integrated into a single secure environment, providing real-time visibility of building operations, analytics, and actionable intelligence.

EJK Automation used the Division 25 approach to integrate different building operating technologies. The company's President, Jerry Edwards, explains "Division 25 gives us the ability to easily integrate the different operating systems, whether it's the HVAC, lighting, utility metering, daylight harvesting, and so forth. It allows us to bring these technologies together on a single network via the BACnet® open protocol. The result is a single source talking the same language and following the same protocols."



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Duane Case

Principal, Hernando High School
DeSoto County Schools





Optimizing the **learning environment**

At Hernando High School, Siemens building automation technology brings HVAC, lighting, occupancy detection, daylight harvesting, and other building functions together on a single digital foundation. Desigo Optic serves as the central software platform, while TRA coordinates room-level HVAC, lighting, and shading to enhance occupant comfort, support learning, and improve energy performance.

Siemens' approach to open, interoperable systems allows these technologies to communicate seamlessly, helping to ensure classroom environments can automatically adjust based on current occupancy, scheduling, or instructional needs. This digital foundation transforms the facility itself into an active participant in the learning experience.

Edwards describes how room-level controls can automate temperature and lighting functions together depending on the needs of the classroom. "The teacher can go up, select the temperature, tap the zone button for the smart board, and instantly adjust the learning profile. The lighting is appropriate for the teaching methodology, and the temperature is comfortable, allowing the students to really focus on the subject matter."

Ultimately, this strategy is intentional and supports the district's larger objective: technology that serves the educational environment, rather than becoming an end in itself.

Moving from reactive to **proactive operations**

Jonathan Hodges, Energy Coordinator and HVAC Supervisor for DeSoto County Schools, oversees HVAC operations across 44 district buildings, encompassing more than 4,000 HVAC units. He says, "Hernando High School is different than any other school we've built. Because of the technology that we've put into it, we're able to access it from anywhere, even from my mobile phone, which happens quite often. Any changes that happen out of the ordinary can be addressed immediately."

Desigo Optic's secure cloud-enabled building management capabilities are central to this shift, allowing facilities teams to monitor system performance in real time and respond to issues before they escalate. By integrating devices and sensors, advanced analytics, and remote system access, this technology has enabled the facilities team to move from reactive maintenance to proactive, data-driven operations.

Real-time visibility also helps the facilities team to identify issues sooner, make adjustments remotely, and organize technician priorities before problems interfere with classroom instruction. Hodges notes, "Since we can see everything on our end and we notice issues before educators do, I'm able to get a technician onsite before anyone can lodge the first complaint."



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Energy Coordinator and HVAC Supervisor
DeSoto County Schools





Using greater efficiency to support the educational mission

With Desigo Optic now on board, school spaces respond automatically to the school's schedules and their use at any point during the school day. For example, occupancy sensors can recognize when a room is vacant, while daylight harvesting and automated HVAC and lighting controls can help reduce unnecessary energy consumption. Siemens' energy management capabilities also provides the data, analytics, and reporting needed to better understand long-term performance and suggest improvements.

While Hernando High School is still establishing its baseline, Desigo Optic is already capturing valuable operational data that will help determine energy optimization strategies across the district. According to Hodges, "Every dollar that we save on our end is one that we can put back into the classroom for our teachers and our kids."

He goes on to say that this experience has been both transformative and eye-opening from his perspective. "If I had to sum up my experience with this project, it's been a large undertaking, but the results have been amazing," he says. "The ability to be able to have everything at our fingertips, to be able to control anything with the lighting, HVAC, daylight harvesting, occupancy...the way that this building operates, it makes our lives easier. And from what I've been told by students and the staff, it's been great on their end too. They've really enjoyed it."

Creating a smart school creates better student outcomes

Today, Hernando High School has become a source of pride for students, educators, and its surrounding community. Principal Case reflects on the impact of the new school, noting that Mississippi has been steadily rising in national rankings, which he attributes in part to strong leadership, industry partnerships, and a clear focus on what matters most in education.

He emphasizes that today's students have grown up in a digital world, making technology a natural part of how they learn and engage: "Last year, we had 14 National Merit semifinalists and 60 seniors scoring a composite 30 or higher on the ACT (out of 36). We've never had that before" he says. He believes these accomplishments are closely tied to the way technology supports teaching and learning, helping students access information, deepen understanding, and prepare for college and careers in a modern, connected world.



Turning building data into **smarter decisions**



Real-time visibility



24/7 remote access



Proactive maintenance



Optimize performance

A **blueprint** for the journey ahead

For DeSoto County Schools, Hernando High School represents a key milestone in a much longer journey. The digital foundation which integrates technology and systems can expand as the community needs and technologies evolve – offering a model for connectivity and interoperability, planned from the beginning.

That long-term strategy is consistent with Uselton's broader philosophy, which balances student needs with the needs of a rapidly changing workforce. Over the past several years, he notes, those changes have accelerated, requiring the district to evolve what it offers academically and that its school facilities modernize to reflect that demand. With an expanded focus on career and technical education, the goal is to meet students where their passions are and recognize there's a different path for everyone.



We're proud to be part of what people call the 'Mississippi Miracle,' where the state has moved from 49th in the nation in school rankings to 16th."ⁱⁱ

Cory Uselton
Superintendent of Education
DeSoto County Schools



Case added, "That progress reflects our teachers, students, and administrators because the real work happens in the classroom every day. Our teachers have worked incredibly hard to ensure our students are prepared to be successful, and that's what we're most proud of."

That ambition now extends to the buildings themselves, creating a smart, integrated environment for today's students and a blueprint for the schools that will serve DeSoto County in the decades ahead. Case concludes, "If you're having a great experience, if you enjoy going to school, you're going to do better in the classroom or on the field, and you're going to work harder. People are now moving to Hernando because they want to come to our school; the future here is bright."

Sources:

¹ Northeast Mississippi Daily Journal | [link](#)

² Office of the Mississippi State Treasurer | [link](#)

Legal Manufacturer

Siemens Industry, Inc.
950 Deerfield Parkway
Buffalo Grove, Illinois 60089-4513
United States of America
Telephone: +1 (847) 215-1000

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