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IT Shops Strike Partnerships to Make Data Center Overhauls More Efficient

Teams from multiple departments are able to pool finances and collaborate to implement innovative solutions.

by [Melissa Delaney](#)

Melissa Delaney is a freelance journalist who specializes in business technology. She is a frequent contributor to the CDW family of technology magazines.

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The technology services team at [Rocklin Unified School District](#) may as well have had its maintenance crew on speed dial. The HVAC unit in the suburban Sacramento district's data center was at the end of its life, and maintenance was **constantly repairing outages and system failures**.

"We were getting to some system obsolescence issues, and maintenance was at the end of their bag of tricks to keep everything going," Rocklin USD CTO Mike Fury says.

"Both departments came to the same recognition that there was a problem that needed to be addressed," adds Craig Rouse, Rocklin USD's senior director of facilities, maintenance and operations.

Rather than leave it to the facilities department to replace the HVAC unit with a similar system, **tech services partnered with maintenance and facilities** on a larger project to maximize data center space and efficiency with a more innovative solution.

During the summer of 2017, the departments pooled finances and resources to implement the [Vertiv SmartRow modular data center](#) at its main site and as its disaster recovery backup at a district high school. Such collaboration makes sense as a growing number of facilities systems, from HVAC to phones, run over data networks.

"There's a lot of convergence and a lot of intradepartmental communication that's taking place," says Fury. "More so than ever before."

Collaboration — particularly in school districts, which are often strapped for resources — is **essential with today's data center projects**, says Laura DiDio, principal of ITIC, a research and consulting firm. "Everyone wants to guard their fiefdoms," DiDio says, "but breaking down those silos is beneficial for all involved."

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K–12 School Departments Partner to Move Toward Innovation

While the Rocklin USD technology, maintenance and facilities departments agreed that working together was in everyone's best interest, they **went into the project with different**



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philosophies, explains Fury.

Maintenance and facilities had an environmental system perspective; they had envisioned replacing the old HVAC units with similar, traditional roof-mounted AC packs that are efficient at cooling larger spaces. Technology services saw the project as an **opportunity to maximize data center efficiency** after years of virtualization and consolidation.



“There's a lot of convergence and a lot of intradepartmental communication that's taking place.”

Mike Fury, CTO, Rocklin Unified School District

The SmartRow system offers an innovative and efficient turnkey solution. Rather than cool the entire data center, the system, which has a smaller footprint to begin with, just cools the rack and equipment itself.

While the system is intelligently designed, though, it's not exotic, says Fury. The air conditioning units are common enough that a technician can work on them without having to bring in a specialist or specialized equipment. “Having some **self-maintainability in the long run** was a big selling point,” adds Fury.

He credits the collaboration among the departments for the success of the project. “I think that's one of the reasons, if not the primary reason, why we were so successful,” he says. “We **came together as a unified team**, worked hard to understand each other's needs and made sure those needs were part of the project requirements.”

Team Building Is Essential for Digital Transformation

Like Rocklin USD, the [Moreno Valley Unified School District](#) in California had been **plagued by frequent power outages**. But IT Director Aaron Barnett knew that upgrading equipment wouldn't be sufficient. The district office wasn't designed to accommodate a

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data center – equipment had been housed in a former men's room – so Barnett reached out to the facilities department to help him change that.

Because it was IT's first construction project, they **relied on other departments**. They consulted with purchasing to ensure the procurement process for the upgrade met all legal and contractual obligations and for help with the bidding process.

"Facilities was a critical part of the design process," says Tim Kelly, systems administrator at Moreno Valley USD.

Together, IT and facilities weighed options for either **adapting the building to accommodate a data center** or erecting one outside the school. They determined that building inside would be more costly, so facilities worked to review possible external locations, taking into consideration underground utility locations, parking needs, lighting and proximity to the existing building.

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The number of cabinets in the Washington state Office of Superintendent of Public Instruction's data center – down from 12, thanks to virtualization, hyperconvergence and hardware advances.

Source: OSPI

All of the departments worked with [CDW·G](#) and [Schneider Electric](#) on a prefabricated modular data center that sits outside of the department office building.

The all-inclusive IT module includes [racks](#), [power distribution units](#), an emergency generator, fire suppression, cooling and [StruxureWare](#) data center infrastructure management software.

By combining knowledge, expertise and manpower from the facilities and IT departments, Moreno Valley USD was able to overcome its space issues and design an **efficient alternative data center** that can scale to support the district's growing needs.

"My advice to other IT leaders embarking on similar data center upgrades is to get buy-in from as many other departments as possible," says Kelly. "Utilize the expertise of each department. It is absolutely a team endeavor."



Consolidate Data Centers to Limit Redundancy

The benefits of data center collaborations aren't limited to district-level departments. Washington state's [Office of Superintendent of Public Instruction \(OSPI\)](#) moved its data center from a 120-year-old building where moisture regularly shorted out equipment to a new, centralized state data center with redundant power and cooling systems and 24/7 security and personnel.

After the 2011 construction of a new state office building with a high-capacity data center, the legislature passed a law requiring all state agencies to **vacate local data centers** by June 30, 2019.

The idea was to scale back the number of data centers statewide and gain economies of scale, security controls and other advantages of a centralized model, says Peter D. Tamayo, OSPI assistant superintendent and CIO.


The office weighed **whether to move to the cloud or to the state data center**, but ultimately chose both: Off-the-shelf applications, including [Microsoft Active Directory](#), [Office 365](#) and [Microsoft SharePoint](#), shifted to the [Microsoft Azure cloud](#) while large databases and custom apps shifted to the state data center, about 10 blocks away.

Inside the state data center, OSPI manages three cabinets (down from 12 in the old data center, thanks to virtualization, hyperconvergence and hardware advances), using the [HPE SimpliVity hyperconverged platform](#). OSPI also plans to move to next-gen [Cisco firewalls](#) with intrusion prevention and detection systems.

In addition to the added functionality, Tamayo says the **collaborative work has been invaluable**. Project managers from OSPI and the state data center worked closely throughout the transition, and follow an onboarding process to ensure security and reliability.

"There are more controls put in place in the data center," he says. "It's more of a formal process."

ROBERT HOUSER



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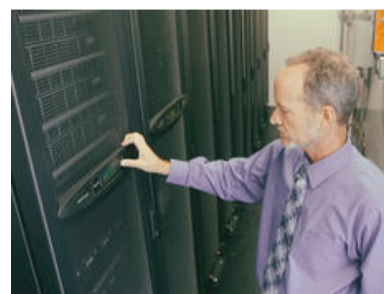
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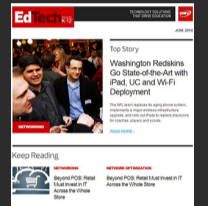


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