

The Transformation of the State of Ohio Computing Center

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Contents

The Transformation of the State of Ohio Computing Center (SOCC)	3
Background	4
January 2011 – January 2013: Initiating A Dialogue and Designing A Strategy	4
February 2013 – February 2014: Remediating the SOCC and “Co-Managing” with IBM	5
March 2014 – Spring 2016: Server Migrations and Deepening the Partnership	6
Summer 2016: Impact and The Path Ahead	7
Acknowledgments	8

The Transformation of the State of Ohio Computing Center (SOCC)

In 2011, officials at Ohio’s Department of Administrative Services (DAS) faced an enormous challenge: the State’s Information Technology (IT) setup was fragmented and inefficient. Among other signs of discontinuity, the State had more than 32 data centers spread across 26 Cabinet agencies, over 9,000 servers, and 19 different e-mail systems.¹ This was a byproduct of the State devoting more than 70 percent of its IT spending to maintaining aging infrastructure, rather than investing in citizen-facing applications. The end result was an approach that was not only disjointed but also poorly positioned to produce innovations that would benefit the people of Ohio. The State of Ohio, as State CIO and DAS Assistant Director Stu Davis lamented, was spending money on the “wrong things.”²



Modernized Ohio Computing Center)

Under the leadership of recently elected Governor John Kasich and newly appointed DAS Director Robert Blair, Davis and his colleagues therefore embarked on a massive effort to revamp the State’s approach to IT. One of the most important parts of this strategy was a plan to modernize the State of Ohio Computing Center (SOCC). State officials wanted to transform the SOCC—which ranked among the ten largest data centers in the country but had not been updated in 20 years—into a cutting-edge facility that could host the data of State agencies, public universities, and local government.³ If DAS could achieve that consolidation, the agency’s leaders believed that they could improve the efficiency of the State’s enterprise approach to technology; bolster IT security; and free public officials to focus more energy on helping the people of Ohio, rather than maintaining aging infrastructure.

While DAS’s objective was clear, the agency’s officials had to wrestle with a number of difficult implementation questions, several of which related to cross-boundary collaboration. How would they achieve buy-in from stakeholders accustomed to controlling their IT infrastructure? Should they work with a private sector entity, and, if so, how should they structure the arrangement? How would they finance the effort? How would they lead effectively during what promised to be an arduous reform process?

[1] Interview with Stu Davis, Chief Information Officer, State of Ohio, by telephone, August 10, 2016. Hereafter cited as Davis interview. Unless noted, all subsequent quotations from and attributions to Davis come from this interview.

[2] Stu Davis, “Unlocking the Cloud through IT and Procurement Collaboration,” Presentation at the National Association of State Procurement Officials Leadership Academy, August 2016.

[3] Robert Blair, “Creation of Winning Public Partnerships.” Presentation obtained by Leadership for a Networked World through personal communication with DAS staff.

Background)

DAS provides a variety of services (including staff training and recruitment, office procurement, leasing, and IT) to other state agencies, local governments, and public universities. The agency consists of six divisions, one of which is focused on IT. In 2015, DAS's disbursements totaled \$588.2 million, approximately 53 percent of which came from IT.⁴

January 2011 – January 2013: Initiating A Dialogue and Designing A Strategy

Although the State of Ohio faced a number of challenges with its approach to IT, it also had several advantages that DAS could leverage to advance reform. One was the existence of the SOCC, which, though outdated, spanned more than 350,000 square feet.⁵ Another was the presence of the Ohio Administrative Research Network (OARnet), a high-speed research and academic network that had been created in 1987 and helped to foster a community of devoted IT professionals.⁶ Finally, the State had already begun to explore the possibility of IT reform. In 2008 and 2009, the State had commissioned a pair of studies that examined the possible benefits of consolidation; around the same time, the State had created a Multi-Agency CIO Advisory Council (MAC) that convened CIOs from different State agencies to discuss ways that the State could improve IT service.⁷ This dialogue resulted in the release in late December 2010 of an "Enterprise IT Statement of Direction" that stipulated that the State of Ohio had to "consolidate [its] IT infrastructure"; the report also identified critical next steps, including using the SOCC to generate cost efficiencies.⁸



Data Center Team)

Hoping to build on this foundation, DAS officials began accelerating and broadening the

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- [4] "About DAS," Ohio Department of Administrative Services, State of Ohio, available at <http://das.ohio.gov/> (accessed on August 23, 2016); and "Fiscal Year 2015 Annual Report," Ohio Department of Administrative Services, available at <http://das.ohio.gov/Portals/0/DASDivisions/DirectorsOffice/pdf/2015%20Annual%20Report%20small%20size.pdf> (accessed on August 23, 2016).
- [5] Rutrell Yasin, "Ohio Undoing Decades of IT Sprawl with Shared Infrastructure," GCN Magazine, March 22, 2013, available at <https://gcn.com/articles/2013/03/22/ohio-undoing-it-sprawl-with-shared-infrastructure.aspx> (accessed on August 23, 2016).
- [6] "OARnet History," OARnet, 2016, available at <https://www.oar.net/about/history> (accessed on August 23, 2016); and Interview with Nelson Vincent, CIO, University of Cincinnati, July 22, 2016. Unless noted, subsequent quotations from and attributions to Vincent come from this interview.
- [7] Davis interview; and Davis, "Unlocking the Cloud through IT and Procurement Collaboration."
- [8] "Enterprise IT Statement of Direction," State of Ohio Department of Administrative Services, Office of Information Technology, and The Multi-Agency CIO Advisory Council (MAC), December 29, 2010, pp. 21-22, available at <http://das.ohio.gov/Portals/0/DASDivisions/InformationTechnology/IS/Ohio%20Enterprise%20IT%20Statement%20of%20Direction%2012%2029%2010%20Final%5B1%2003-07-11%5D.pdf> (accessed on August 24, 2016).

dialogue about IT reform. Most notably, in early 2011, Davis began convening the MAC—which had been meeting approximately twice per year—once every six weeks. In addition to meeting more frequently, Davis wanted to inject a sense of urgency in these conversations; however, he also realized that he had to be sensitive in his approach. This was in part because some agency CIOs were likely to be wary of ceding power as part of a consolidation effort. In addition, outside of DAS's role in the procurement process, DAS had no leverage over other agencies. Thus, he attempted to impress upon his colleagues his and the Governor's sense that, in the aftermath of the Great Recession, the long-discussed possibility of IT reform had become a fiscal necessity. Davis recalled:

We had discussions about the Statement of Direction, and it was like, 'Okay, here's the deal. Either we're going to consolidate, and we're going to figure out how to do this, or someone else is going to come in and do it for us.' At the end of the day, this is all about taxpayer dollars, and we're spending ... the same dollar 26 different times in the 26 different Cabinet agencies, and it just doesn't make sense.

Buoyed by the sense that reform was rapidly becoming an urgent priority, 18 of the 26 agency CIOs soon created a separate committee to develop a detailed strategy for IT transformation. They focused on nine areas, ranging from finance and rate setting to network storage and servers. They also recruited approximately 100 high-level subject-matter experts (including leaders who could offer insights into IT, HR, and fiscal issues) to participate in working groups focused on those topics. The end result of this dialogue—which soon broadened to include union officials and representatives of the business and procurement communities—was a comprehensive transformation plan released in January 2013.⁹ The plan's goal was to create “a shared solutions model for the delivery, support, maintenance, and modernization of Ohio's IT infrastructure, enterprise and infrastructure applications, and enterprise IT governance across all Executive branch agencies.” One of the most important parts of the approach was the consolidation of the State's IT infrastructure into the SOCC.¹⁰ Thus, following years of dialogue, the State had made a commitment to move forward with change and outlined a detailed approach to achieve its goals.

“Don't hesitate, you're not going to have it perfect. You just push from shore and you go.”

– Stu Davis

Chief Information Officer, State of Ohio

February 2013 – February 2014:

Remediating the SOCC and “Co-Managing” with IBM

While the crystallization of a strategy for IT reform was a critical step forward, DAS officials now had to ensure the successful implementation of that plan. This began with the remediation of the SOCC. Despite its massive footprint, the four-floor SOCC was at that point ill-equipped to host the State's IT infrastructure. Among other problems, the data center's equipment needed to be updated; the facility had walls where there were not supposed to be any obstructions, which interfered with the climate control system; and the building's power sources needed significant repairs.¹¹

Hoping to move forward with its strategy as efficiently as possible, the State issued a Request for Proposals (RFP) that resulted in a ten-year, \$267 million contract with IBM in the winter of 2013 to remediate the SOCC

[9] Davis interview.

[10] “Information Technology Transformation Plan,” Office of Information Technology, Ohio Department of Administrative Services, January 9, 2013, available at <http://das.ohio.gov/Portals/0/DASDivisions/InformationTechnology/IS/pdf/Transformation%20Plan%201-9-2013.pdf> (accessed on August 23, 2016).

[11] Davis interview; Yevgeniy Sverdlik, “State of Ohio Hires IBM To Consolidate Data Center,” Datacenter Dynamics, March 21, 2013, available at <http://www.datacenterdynamics.com/news/state-of-ohio-hires-ibm-to-consolidate-data-center/74711.fullarticle> (accessed on August 24, 2016); and Interview with Kevin Hill, Director, U.S. State and Local Government Industry, IBM, by telephone, August 24, 2016. Unless noted, subsequent quotations from and attributions to Hill come from this interview.

and (subsequently) help to consolidate different public sector clients onto a cloud-based infrastructure.¹² IBM was an attractive partner for the State in part because, according to Kevin Hill, IBM's Director for U.S. State and Local Government Industry, the two entities had a working relationship that stretched back more than 30 years. In addition, over the course of an RFP process that had begun in late 2011, the firm had impressed DAS with its technical plan, detailed budget, and its commitment to an approach that Davis described as "co-management." The State CIO elaborated:

Everybody's like 'co-manage, what does that really mean?' I said, 'Look, we're going to find our way through this, but sometimes IBM is going to take the lead, and sometimes the State's going to take the lead, and it's that simple. Where it makes sense, it'll become clear as we walk through and do this.'

The approach paid dividends. In February 2014, IBM completed the remediation of the SOCC one month early and within its budget.

March 2014 – Spring 2016:

Server Migrations and Deepening the Partnership

Following the remediation of the SOCC, DAS was prepared to start migrating other agency's servers to the central facility. This was both the most important and most challenging part of the process to date. In order to achieve significant savings and service improvements, the State needed a critical mass of State agencies, universities, and local governments to participate. Nonetheless, DAS officials knew there was a strong possibility that other stakeholders would be reluctant to make the transition. This was in part because, as Blair explained, "certain agencies...were terribly afraid to give up their computers...because they wanted control of them."¹³ In addition, a key part of DAS's funding model—which also drew on DAS's regular budget as well as the budgets of individual agencies through the IT Development Fund—was a chargeback model that required each stakeholder to pay DAS to participate in the SOCC.¹⁴ Thus, even though the data center was expected to save agencies money by decreasing the need for infrastructure investments and leveraging economies of scale, some agency CFOs initially viewed it as a new expense that they were reluctant to incur.¹⁵

DAS officials mitigated this resistance in several ways. First, as Blair explained, they emphasized to possible participants that they would not be sacrificing control of their computers but instead merely moving them. Second, they developed a workforce model that minimized the threat to existing staff and maximized the continuity between the SOCC and existing agencies. Specifically, the State made it clear that it would not layoff any staff and that any personnel changes and savings would come solely from attrition; they also made an effort to recruit staff from participating agencies to the SOCC. According to Mark Walker, the CIO of the Ohio Department of Taxation, these linkages were reassuring because there was someone in the SOCC who was familiar with their specific needs.^{16,17}

[12] Yasin, "Ohio Undoing Decades of IT Sprawl with Shared Infrastructure."

[13] Interview with Robert Blair, Director, Ohio Department of Administrative Services, May 23, 2016. Katrina Flory, the Chief Administrator in the Office of the State CIO, and Spencer Wood, the Chief Operating Officer in the Infrastructure Services Division of DAS, also participated in this interview, which will hereafter be cited as DAS interview. Unless noted, subsequent quotations from and attributions to Blair, Flory, and Wood come from this interview.

[14] As Davis explained, the IT development fund represented a small portion (less than two percent) of each agency's IT budget. DAS—which received no new funding from the State to finance the IT transformation effort—received permission from the Ohio Office of Budget and Management to request these funds from each State agency.

[15] Interview with Mark Walker, Chief Information Officer, Ohio Department of Taxation, by telephone, August 24, 2016.

[16] Walker specifically pointed to the example of one of his IT security staff members who made the transition to the SOCC. This was helpful, he said, because he had someone in the central data center who was familiar with the IRS's compliance regulations.

[17] Walker also serves on the State of Ohio Technology Board as the Business and Industry and Line of Business Lead. The existence of this

Finally, at Blair's urging, DAS officials celebrated their "quick wins," most notably the introduction of new software—such as Office 365—and several agencies (e.g., the Department of Health and the Ohio Environmental Protection Agency) that joined early in the process.¹⁸

Leveraging this momentum, DAS soon saw a substantial increase in participation in the SOCC. This included a number of additional State agencies; several county and local governments, the most significant of which, according to DAS officials, was Cuyahoga County; and multiple major universities, including Ohio State and the University of Cincinnati. Many of these participants were swayed by not only the economic argument for joining but also the positive impression that they received during their tour of the data center. For example, Nelson Vincent, the CIO of the University of Cincinnati, who persuaded University of Cincinnati officials to shelve a \$9.2 million reform plan and instead join the SOCC, recalled being pleasantly surprised by his positive impressions of the data center. "I had been dragged to a lot of data centers," Vincent said, "[but] I said, 'They could really pull this off here. This building has the right bones.'"

Summer 2016:

Impact and The Path Ahead

Having achieved a critical mass of participation, the SOCC has had a significant, positive impact on the State of Ohio's IT environment. According to Katrina Flory, the Chief Administrator in the Office of the State CIO, these efforts have saved the State more than \$100 million through IT optimization. What's more, that figure does not include the money that other agencies have been able to save on planned infrastructure investments and instead reinvest in other projects. For example, according to Davis, the Department of Transportation was planning to invest \$800,000 in its own Microsoft e-mail platform; but by instead participating in the centralized e-mail system, they were able to spend those funds on buying plows and other items they needed to serve the people of Ohio. This is emblematic of a broader trend in which the State of Ohio has been able to shift more of its IT spending to citizen-facing applications. Whereas the State used to spend approximately 70 percent of its IT budget on infrastructure and maintenance, approximately half of the IT budget is now focused on citizen-facing applications.¹⁹

"Communicate, communicate, communicate, [because] communication leads to coordination, which leads to collaboration."

– Stu Davis

Chief Information Officer, State of Ohio

While the reform project has already had an enormously positive impact, DAS officials still see room for improvement. Most notably, they would like to increase the portion of their IT budget devoted to citizen-facing applications to at least 70 percent. Nonetheless, they have already made enormous progress and are therefore in a position to offer insights about how to effect significant change in state government. One of the most valuable takeaways, according to Davis, is the need for engagement. "Communicate, communicate, communicate," he said, "[because] communication leads to coordination, which leads to collaboration." For his part, Blair points to the importance of high-level political backing. "The biggest thing," he said, "is having the Governor."²⁰ Finally, a variety of officials highlighted the need for pairing planning with action. Davis likened this to taking a boat trip. He said:

Board was another factor that helped to bind different stakeholders together, facilitate dialogue, and instill confidence in entities that were weighing whether to participate in the SOCC.

[18] Davis interview; and DAS interview.

[19] Ibid

[20] Flory similarly identified Blair—who was in regular contact with the Governor, his staff, and other Cabinet officials—as a critical advocate for the project.

If you were going to canoe down a river, and you decided to walk the whole river before you put your canoe in, what's the point in going down the river in the canoe, right? You navigate it as you go. So, push from shore, you don't have to have everything perfect. It's going to change anyways, and you navigate those changes as you go through the process, but you got to start. Don't hesitate, you're not going to have it perfect. You just push from shore and you go.

With Blair, Davis, and their colleagues manning the boat, DAS has made enormous progress, and the people of Ohio are benefiting.

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