

SUNCO

COMMUNICATION & INSTALLATION

A system upgrade that truly made the grade

How one school board's telecommunication system went from outdated and unsupported to one that is optimized for education, cost-effective and backed by reliable service



EXECUTIVE SUMMARY

In 2023, one of the largest school boards in Alberta put out a request for proposals to upgrade its aging telecommunication system, which ran on Mitel 3300 Communications Director controllers. The school board was concerned about the increased risk of failure in its system hardware, which no longer had support. It was also dissatisfied with the system's limited menu of features and functions and with inefficiencies caused by the accumulation of "obsolete data" – information that's incorrect, outdated, incomplete or duplicated.

In its search for a telecommunications provider that could address these concerns, the school board identified two key criteria: a price tag that worked within its moderate budget and a timeline with start and end dates that coincided with the academic summer break. Sunco beat out competing project proposals with a unique solution: System integration on a private cloud.

To upgrade the old system, Sunco consolidated all of the school board's 53 Mitel phone systems into a unified Mitel MiVoice Business virtual platform running on Voice over Internet Protocol (VoIP). Unlike other proposed projects, which recommended putting the system onto the public cloud, Sunco's solution was based on a private cloud.

- **Cost-efficiencies through strategic decisions.** Sunco's proposed solution worked out to less than \$5 per user compared to competitors' pricing, which was more than double Sunco's price per user. Sunco also achieved cost-efficiencies by leveraging existing resources such as software – which it updated –and the school board's in-house IT team, and by passing along lower wholesale pricing for network services.
- **Education-optimized features and function.** The updated system gave the school board new features such as electronic 911, hot desking, integration with each school's public announcement system, voicemail transcription, call recording and standardized extension numbering across the organization. Regular updates will ensure more features can be added in the future.
- **Reliable support today and in the future.** Sunco gave the school board a choice of service level and pricing options to suit its needs and budget. The school board opted for the Gold package, which provided a high level of support while keeping system management in-house.
- **A project plan designed for success.** To meet the tight timeline, Sunco rolled out the project in seven phases with clearly defined schedules and milestones. From start to finish, the Sunco team worked collaboratively with the school board and maintained a high level of accountability and responsiveness.

A SCHOOL BOARD'S URGENT PROBLEM:
A telephone system at end-of-life and no support

Reliable communications are vital when you're running an organization responsible for the day-to-day education and safety of thousands of children. In the summer of 2023, Sunco helped one of the largest public school boards in Alberta – operating 53 schools with a collective roster of close to 27,000 students and a staff of more than 3,000 – address the increasingly urgent need to upgrade its telecommunications system.

At 15 years old, the legacy system, which ran on Mitel 3300 Communications Director controllers, was at an increased risk of having some or all of its hardware fail at some point. This was a big worry for the school board: A downtime in phone services could disrupt communication between the school, students, parents and staff and, in certain scenarios, potentially lead to safety issues.

The critical need for an upgrade

By some estimates, between 60% to 70% of Canadian businesses and organizations are still using an old phone system. The Alberta school board identified a number of key challenges with its aging Mitel system:

- **End of support for the hardware.** With the system approaching its end of life, there was no longer any support for the hardware. This created concerns that the school could be left without phones for several days –or even weeks – if the hardware failed and replacement phones were not available immediately.
- **Limited access to new features and functions.** Many of the system's key components, including its servers, had not been updated for some time. This made it harder, if not impossible, to add new features and functions.
- **Accumulation of “obsolete data.”** Over the years, the data underlying the system had increasingly become either incorrect, outdated, incomplete or duplicated, leading to system inefficiencies or, in some cases, poor functioning.

In addition to these infrastructure and technology challenges, the school board grappled with having to deal with multiple vendors for its legacy system, and with unsatisfactory service from its main telecommunications provider. There was also the ongoing need – driven in large part by budget cuts – to contain telecommunication costs. In recent years, the school board had already slashed these costs by close to 70%, but it continued to look for ways to further reduce its telecommunications budget.

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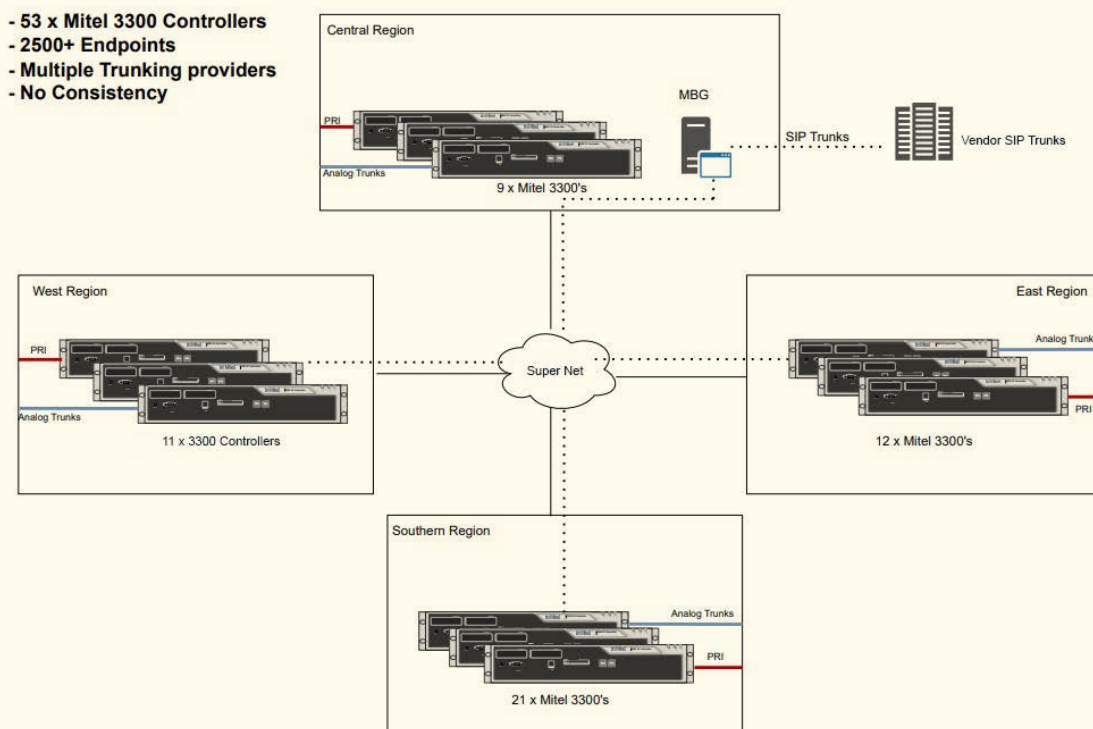
Fixing a complex problem within tight budget and time constraints

As the school board planned for a system upgrade, it brought in a telecommunications consultant to help define its requirements and ensure it hired the right vendor for the project. Ultimately, the board and its consultant identified a need to enhance communication capabilities – with additional functionalities optimized for an educational setting – to make user management more efficient and to reduce the board's costs to own, operate and maintain a telecommunication system.

The upgrade would not be straightforward. As shown below in Figure 1, the school board's legacy system – which had about 2,350 users – had over 2,200 end points running on 53 on-premise Mitel 3300 controllers, with one controller located at each school and at the school board's main site. These controllers were connected through a mix of Session Initiation Protocol (SIP), single-line Primary Rate Interface (PRI) and analogue trunks.

At the same time, the project had to meet two key criteria: a price tag that worked within the school board's moderate budget and a timeline with start and end dates that coincided with the academic summer break. The latter criterion was critical for minimizing disruption to school operations.

Figure 1: The Alberta school board's legacy Mitel system

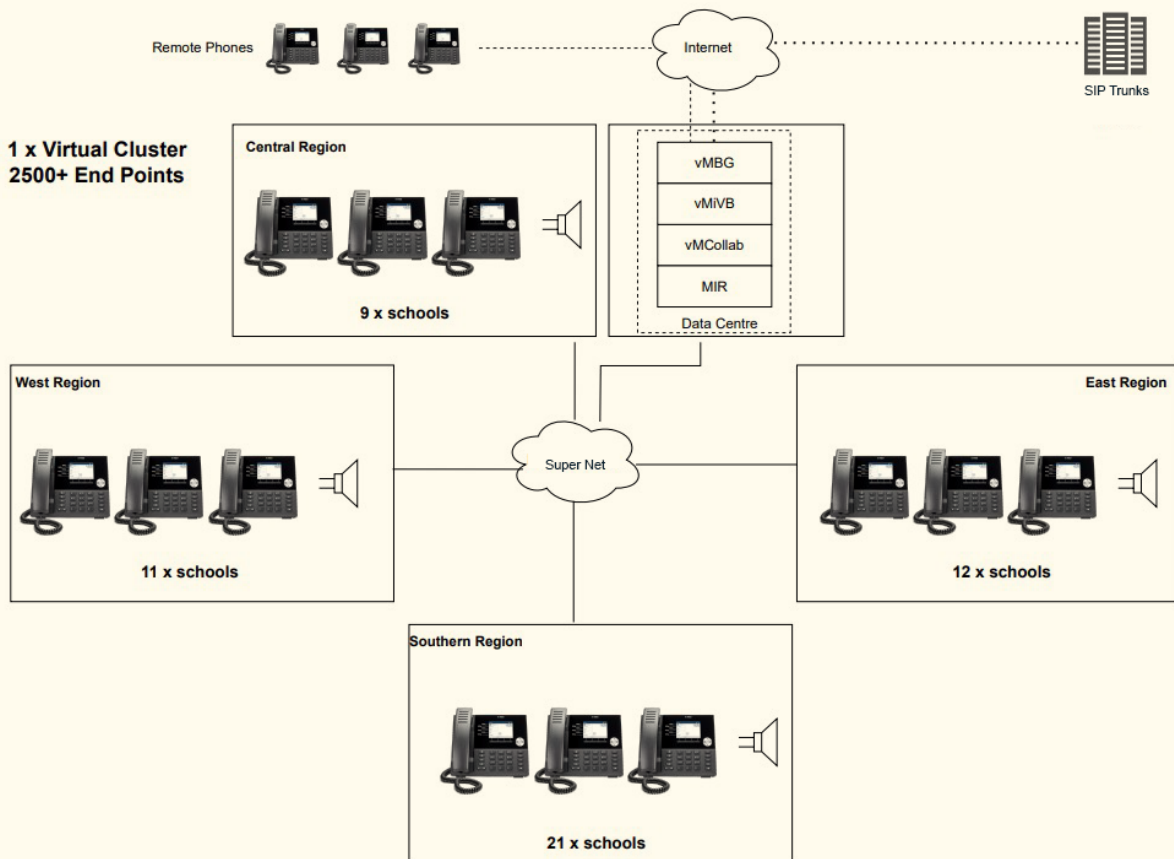


SUNCO'S SOLUTION:
A unified platform powered by private cloud

Sunco beat out competing project proposals with a solution that met the school board's criteria for education-optimized communication capabilities and its cost and completion timeline, combined with a quality offering based on high levels of service and a collaborative approach to the vendor-client relationship. On cost alone, Sunco's proposed solution would work out to less than \$5 per user compared to competitors' pricing, which was more than double Sunco's price per user.

To upgrade the old system, Sunco consolidated all 53 Mitel phone systems into a unified Mitel MiVoice Business virtual platform running on Voice over Internet Protocol (VoIP) – which required building and setting up a new server at each location – and switched the school board's head office to fibre optic Internet. Unlike the other proposed projects, which recommended putting the system onto the public cloud, Sunco's solution was based on a private cloud.

Figure 2: The Alberta School Board's modernized telecommunications system



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Achieving cost-efficiencies by leveraging existing resources

According to global IT research and advisory company 451 Research – which compiles the Cloud Price Index, a benchmark of the costs of public, private and managed clouds – private cloud consistently beats public cloud on total cost of ownership, providing certain thresholds of labour efficiency and utilization are met. “In fact, private cloud can break even at as little as 400 virtual machines per administrator and 50% utilization based on quotations from the CPI’s (Cloud Price Index) annual survey,” 451 Research wrote in one report.

Sunco’s integration of the school board’s multiple systems into a single platform powered by private cloud achieved cost efficiencies in a number of ways:

- The switch to VoIP reduced the hardware in the system infrastructure, translating to less maintenance and lowering overall total cost of ownership.
- Instead of purchasing or subscribing to new software, the school board was able to continue using the software it bought 15 years ago, when its old system was initially set up. Sunco upgraded this existing software, adding new features and functionalities. The software is now current and will continue to be updated regularly by Sunco to further future-proof the system.
- The school board had a strong in-house IT team. Sunco configured the Mitel software on the virtual servers in the school’s data centre to allow the internal team to manage the telecommunications infrastructure. This eliminated additional costs for third-party management.
- As part of its transition to a new system, the school board also switched from direct billing with its network provider to a Sunco managed service package that included network services. Because Sunco had an existing relationship with the network provider and had already negotiated wholesale pricing, the school board could take advantage of lower network fees without having to move to another provider – and ultimately realized savings of about 50 per cent for network services.
- Sunco’s broad offering of managed services packages gave the school board a choice of service level and pricing options to suit its needs and budget. With its IT team trained by Sunco, the school board opted for the Gold package for the first year, which provided a high level of support while keeping system management in-house.

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In addition to bringing in cost efficiencies, Sunco created time savings for the school board through Active Directory integration that enables streamlined user and resources management for system administrators. The switchover at the head office to fibre optic Internet also brought in time savings in day-to-day use as the upgraded connection reduced latency and increased download and upload speeds.

Providing access to valuable new functionalities

The new system gave the school board access to new features and functionalities, including some that are particularly useful in an educational setting. These include:

- Hot desking, which allows teachers to go to any school and simply log into the phone in that school's classroom. This has made it easier for the school and other parties to connect with teachers, no matter what school they're posted to on any given day.
- E911, an enhanced emergency call feature that automatically provides the caller's location to 911 dispatchers. In the past, a telecommunications breakdown during an emergency situation would have required staff to locate a standard phone that could be plugged in directly to an analogue emergency phone line.
- Connection to each school's public announcement systems. With the upgrade, the school board's telecommunications systems became compatible with the PA system at each school.
- Bluetooth features in some of the phones allow users to connect their wireless devices and work hands-free.
- Standardized extension numbers across the school board, allowing callers to contact key personnel at each school using the same extension number for each role, preceded by a designated number for each school.

With new hardware and updated software in its telecommunications system, the school board can easily add more features and functionalities and stay up-to-date with technology innovations. In fact, after the upgrade the school board added call recording and text transcription to its menu of telecommunication features as well as a softphone program to enable telephone calls using any Internet-connected device.

A SOLUTION **built on rigorous** **planning** **and project** **management**

Sunco had a project start date of May 10 and a hard completion deadline of September 29. This timeline was extremely tight, with 53 sites to cut over to the new platform and a number of strategic staff members at the school board away on summer holidays.

Sunco spent a month gathering critical requirements and defining the project scope. This included acquiring telecom bills for phone number analysis, identifying firewall requirements, documenting existing phone extensions and auto-attendants, and initiating the procurement of SIP trunks and Mitel licence duplication for a parallel environment. By the end of the month, Sunco had finalized extensions and call flows for all schools and completed a project workplan.

From start to finish, designed for success

All told, Sunco rolled out and executed the project in seven phases – from requirements gathering and server preparation to deployment, training and project closure. Each phase included clearly defined schedules and milestones.

A number of factors contributed to the success of this project:

- **A mandate to collaborate.** Sunco's team saw themselves not as a vendor but as a true partner and advisor. Before, during and after the project was completed, Sunco and the school board consulted with each other to resolve new questions and develop innovative solutions.
- **High level of accountability.** Sunco and the school board held weekly check-ins to track the progress of the project and ensure the Sunco team was meeting the criteria for success at each phase. These regular meetings kept project stakeholders up to date and provided a ready forum for the school board to share any changes to its project priorities.
- **A logical, learnings-based approach.** Sunco's project plan called for work to start at smaller schools. This created a lower-risk environment during the project's early stages, when Sunco's technicians were still getting to know the intricacies of the system. Logical project planning also eliminated unnecessary steps and accelerated the completion.
- **A responsive team.** As is the case with most complex projects, this multi-system integration did not always go as smoothly as planned. A gap in communication led to the earlier cutover of the phone system at the head office – the only site that was still operating in July and August, when schools are shut down for the summer holidays. The Sunco team communicated promptly with the school board and worked quickly to minimize service disruption.

Figure 3: Sunco's project management plan for the Alberta school board



A SUCCESSFUL PROJECT on all key fronts

Overall, the school board considered its telecom system integration to be a success on several fronts:

- **Project execution and system implementation.** Working collaboratively with the school board, Sunco completed the integration on time – within a very tight schedule – and with very few problems and disruptions along the way.
- **Upfront and ongoing costs.** Sunco’s project cost beat out its competitors, coming in with a per user cost that was more than 50 per cent lower than other proposals. Sunco’s unique private cloud-based solution also provided the school board with a way to reduce its total cost of ownership through significantly lower maintenance and hardware replacement costs.
- **System features and functions.** Sunco updated the school board’s software to allow for the addition of useful features such as E911, hot desking, integration with each school’s public announcement system, voicemail transcription, call recording, and standardized extension numbering across the school board. Regular updates will ensure more features can be added in the future.
- **Service and support.** With Sunco as its telecommunications systems vendor, the school board can now rely on an elevated and reliable level of service. School board staff members who have had interactions the Sunco team have consistently noted the team’s responsiveness, depth of knowledge and overall excellence in customer service.

THE CHALLENGE	THE CRITERIA	THE SOLUTION	THE PLAN
<p>Upgrade a 15-year-old telecommunications system with 2,200 endpoints running on 53 on-premise Mitel 3300 controllers – each located at a different site – connected through a mix of Session Initiation Protocol, single-line Primary Rate Interface and analog trunks.</p>	<p>Cost-efficient project execution and system implementation within an extremely tight timeline.</p>	<p>Consolidate all 53 controllers into a unified Mitel MiVoice Business virtual platform running on Voice over Internet Protocol, backed by ongoing support through Sunco’s managed services package.</p>	<p>Seven phases with clearly defined milestones for each phase, starting on May 10 and completed by September 29. Logical planning eliminated unnecessary steps while weekly check-ins ensured the client was always up-to-date on progress and kept the project team accountable.</p>



About Sunco Communication and Installation Ltd.

Sunco is your trusted independent business telecom and managed IT systems integrator, with more than 20 years of experience helping companies of all size get more from their telecommunications and IT services.

From helping clients achieve cost savings, increased protection and improved performance, to implementing fully managed, customized security, networking and cloud solutions that can scale as their business' grow, Sunco delivers high-quality, integrated business communications solutions with the employee-level commitment and collaborative approach every client relationship deserves.

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