A young girl with dark hair, wearing a blue and white striped school uniform with a white collar, is smiling broadly and looking towards the right. She is sitting at a desk in a classroom. In the background, other students and a teacher are visible but out of focus.

THE IMPACT OF COVID-19 ON ICT WITHIN AUSTRALIAN SCHOOLS

Findings from a national survey of technology
leaders in the education sector

Data#3

aruba
a Hewlett Packard
Enterprise company

2020 has been an incredibly challenging year for IT teams within Australian schools. The workload associated with rapidly enabling large-scale remote learning, and keeping students secured from ever-increasing cybersecurity threats, has been enormous.

For this reason, Data#3 invited schools to participate in our inaugural nationwide education survey. Within the report, we share insights and observations on the technology challenges facing our schools, how they responded to the pandemic, and key priorities for 2021.



91% of schools adopted digital tools and resources to enable continued teaching and learning during the pandemic.

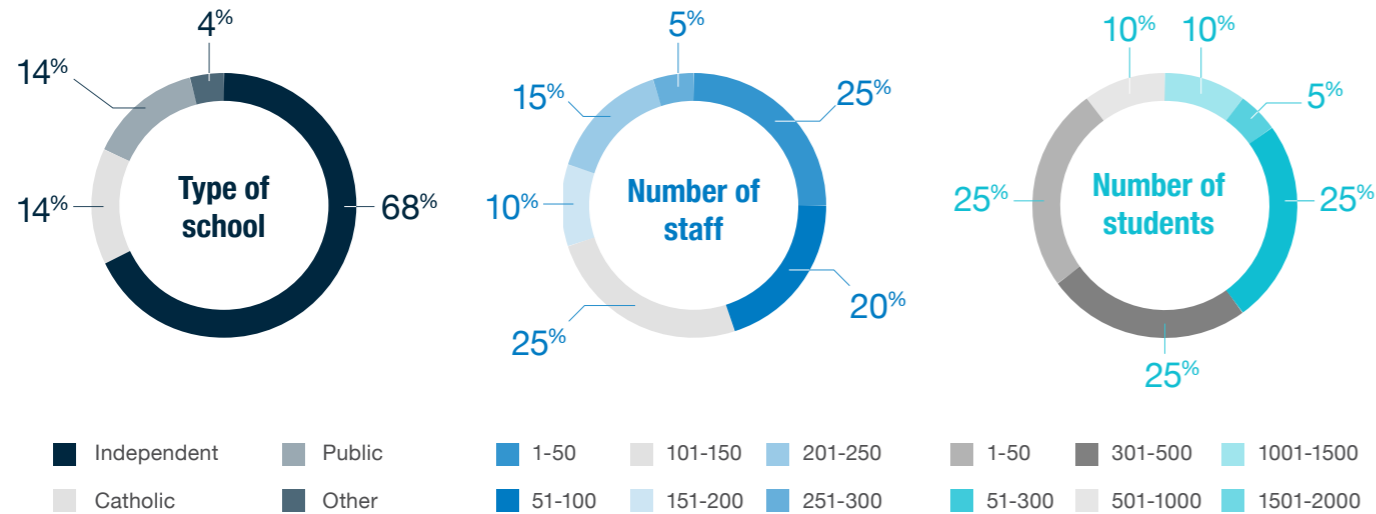


SNAPSHOT OF SURVEY RESPONDENTS

This survey report reflects the responses from primary and secondary schools across Australia.

In conducting the research, we sought to include a broad range of schools. As shown below, the majority (68%) of respondents hail from independent schools, followed by Catholic and public schools (both at 14%), and other types of schools (4%).

In terms of school size, there was a diverse mix – staff numbers most commonly fall in the 1-50 and 101-150 range (at 25% each), yet scale up to a headcount of 251-350. Student numbers are equally diverse, ranging from 1-50 (10%) all the way up to 1500-2000 (10%).



68%
of survey respondents are from independent schools.

Question 1

How would you describe your school's policy with regards to the use of devices (for both students and teachers)?

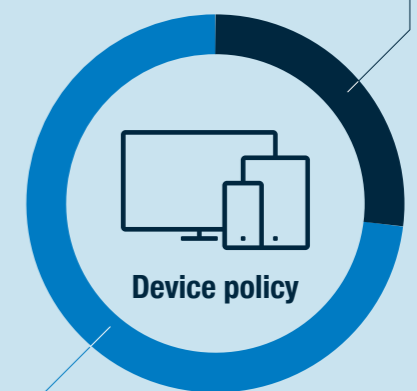
The vast majority (73%) of schools indicated that they supply devices to students and teachers. This points to a preference for maintaining control over the types of applications that students can engage with, and reflects a broader goal of maintaining student safety and security.

By supplying devices to students, schools can also level the playing field for students from different socioeconomic backgrounds, providing equitable access to the technologies, tools and systems needed for modern learning.

Only 27% of schools reported maintaining a BYOD policy. In these instances, security can be harder to manage, especially when students are completing coursework from home, or using devices remotely. If the institution has traditional perimeter network security in place, devices can be somewhat protected when an on-campus student is on the secured campus network. However, there's no control over the device when it's moved away from the network, which is extremely risky.

73%
of respondents own and supply devices to staff and students, indicating a preference for maintaining control over access to applications.

27% Bring your own device (BYOD)



73% My school owns and supplies devices

Respondent quote:

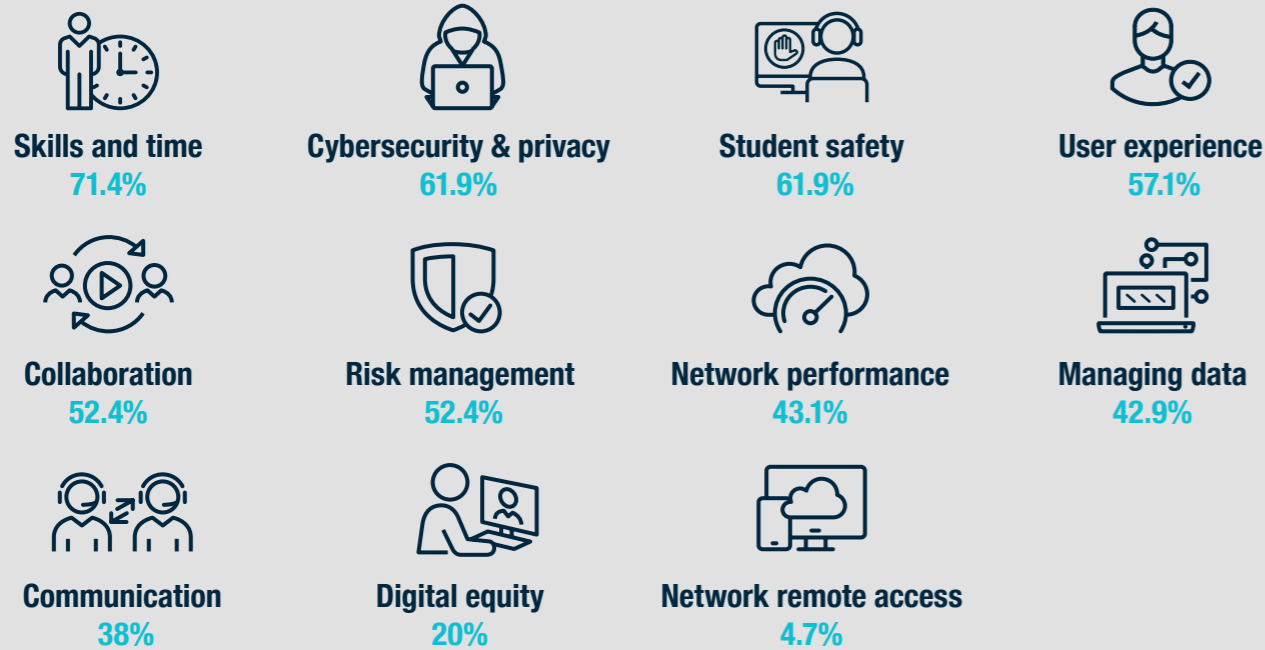


Our biggest challenge was and is upskilling our teachers.



Question 2

What are the top five technology challenges for your school right now?



The top issue for IT leaders in education is reflective of broader industry trends, with 71% of schools citing a ‘lack of IT skills’ as one of their top five challenges. The global war for tech talent is evident even in the education sector, with schools challenged to find qualified employees to equip campuses with the next-generation technologies required. Some schools that are under-resourced internally are turning to outsourced IT management resources to fill the gap.

A prominent consideration is the role that IT plays in looking after the wellbeing of students and staff. ‘Maximising security’ and ‘maintaining student safety and wellbeing’ appeared in the top five challenges for 61% of respondents, and security was the most frequently-cited top priority for respondents.

61.90%
of those surveyed said that privacy and cybersecurity were among their top five challenges.



Respondent quotes:

The biggest impact was the inability to assist some families remotely with technical support and the end user’s bandwidth. Some students needed to come in and ‘remote’ study from school.

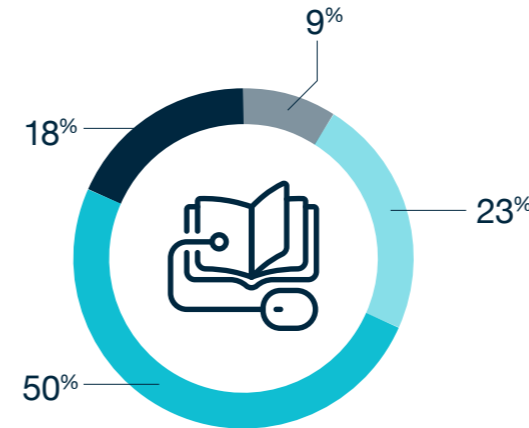


We realised we needed a faster connection and more laptops. We also realised we need a server at school for student data management.



Question 3

Has the adoption of digital learning increased in your school due to COVID-19?



- Not at all
- Yes, we are using digital tools and resources somewhat more than before
- Only for remote learning purposes
- Yes, we’ve accelerated our use of digital tools and resources significantly

Nationwide, schools were forced to rapidly adapt in 2020 to support remote learning. A resounding 91% of respondents adopted digital tools and resources to enable teaching and learning to continue during the pandemic. While 23% of this group only used digital tools for remote learning purposes, the majority (68%) have turned to digital for more than just remote lesson delivery.

This year’s accelerated uptake of digital tools is unlikely to be reversed when the pandemic is over. In fact, in a separate study, 87% of educators have said that in the wake of the pandemic, they ‘expect to use more technology than before’¹. To meet this growing demand, many schools will need to expand their infrastructure and invest in next-generation networks and technologies.

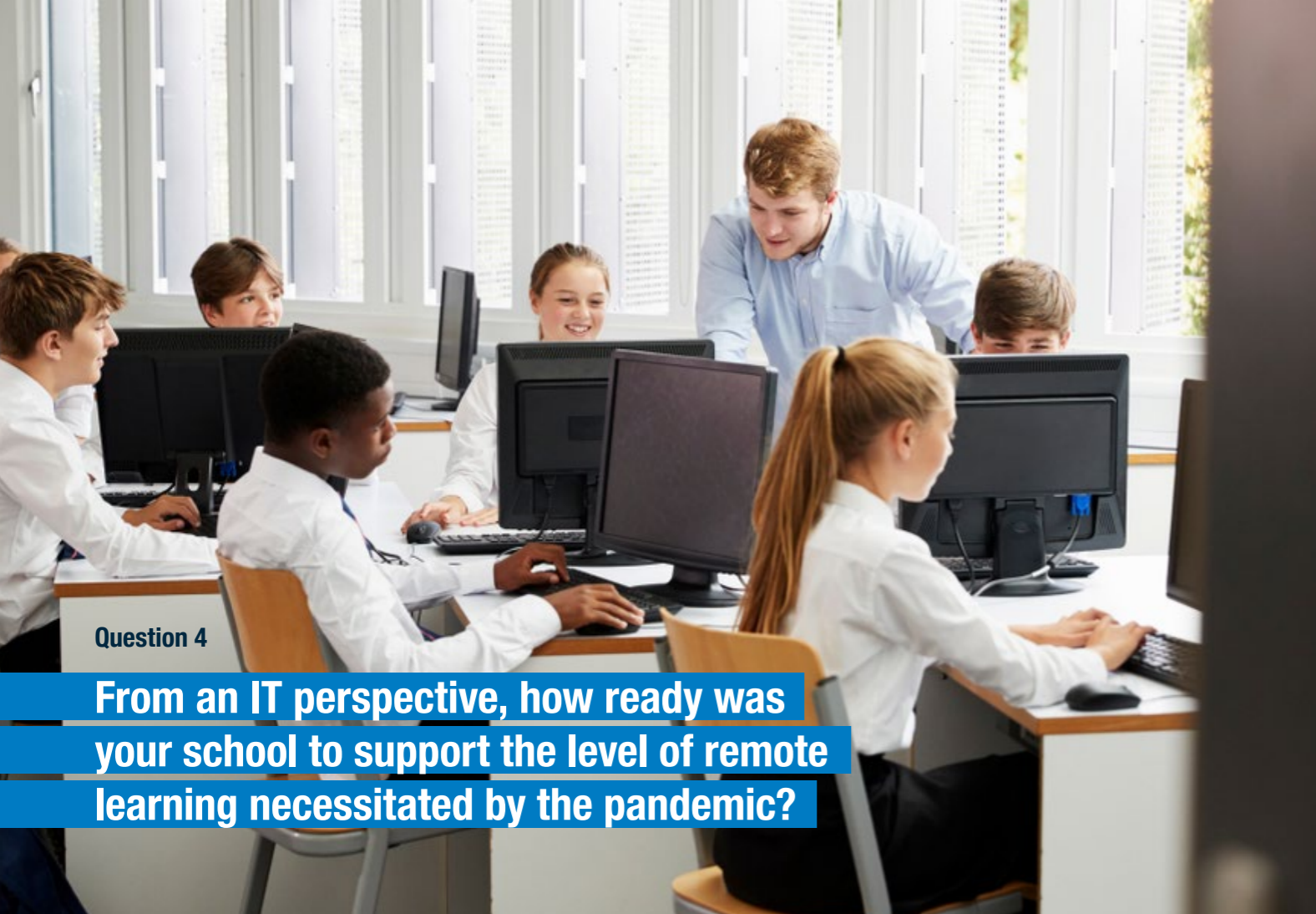
91% of respondents increased their adoption of digital tools and resources during the pandemic.



Respondent quote:

COVID-19 meant we moved the school forward in this area by two years.





Question 4

From an IT perspective, how ready was your school to support the level of remote learning necessitated by the pandemic?

Interestingly, half of the schools surveyed found the transition to remote learning easy. In these schools, existing technology systems and processes were clearly up to the task of supporting teachers in the quest to deliver lessons to students at home.

Of the other half of respondents, 27% were already on a digital transformation journey. With some collaboration and teaching tools already in place, the transition wasn't too difficult. Yet, for 23% of schools, the pivot to remote learning proved to be a challenge – even though they had some existing digital capabilities in place.



- We had some capability in place, but it was challenging
- We had already invested in digital tools and collaboration which made the transition easier
- Completely ready – no issues at all



Respondent quote:

Technology has a significant role in times of uncertainty. Since we already had a good infrastructure in place, the transition wasn't that difficult.

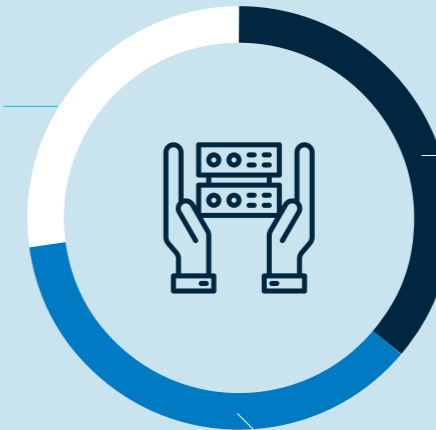


Question 5

How is ICT valued or perceived in your school now?

27%

ICT is now seen as critical to supporting teaching and learning, beyond COVID-19



36% No significant change

37% ICT has a higher profile and value due to COVID-19

The impact of COVID-19 on the 2020 school year cannot be underestimated. Most schools in Australia have been affected, and technology has played a key role in many schools' response to the crisis.

Overall, the perceived value of IT has grown as a result of students transitioning to remote learning– proving that technology has offered a crucial link between teachers and students. The majority agree that technology has grown in value in the classroom, with 36% stating that it now has a higher profile and 27% stating that it is now critical to teaching and learning.

These responses show that while the adoption of new teaching tools and collaboration platforms this year was hurriedly undertaken – in response to completely unforeseen circumstances – it was not in vain. The tools that have been adopted this year look to remain a critical component of the teaching toolkit for years to come.



Respondent quote:

It has lifted the profile of technology and highlighted a need for increased teacher development.



64%

of schools agree that technology is more valuable due to COVID-19, with just under half of this cohort viewing technology as critical to teaching and learning.

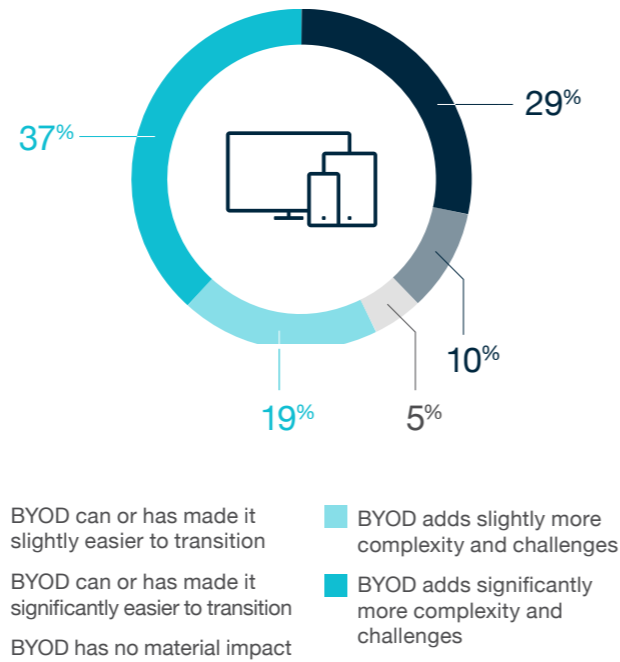
Question 6

With respect to remote or hybrid learning, how do you view a BYOD model?

The question of whether a BYOD model makes the delivery of remote or hybrid learning easier or harder was a divisive one – with respondents almost split down the middle. While around 39% of respondents stated that the ability for students to use their own devices made it ‘slightly or significantly easier’ to transition to remote learning, the majority (56%) indicated that BYOD made things ‘slightly or significantly harder’ for them.

The small skew towards the negative reinforces responses to previous questions. Many schools cite a lack of IT skills and time as a major challenge – getting students’ individual devices set up for remote learning can be time-consuming and requires knowledge of different vendors hardware, which some IT teams may not possess.

Student safety is another top priority – it can be harder to control what students are exposed to online when using their own devices.

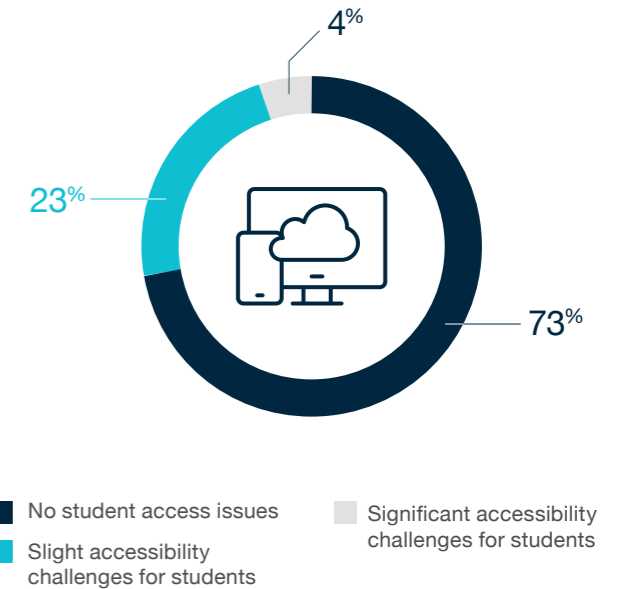


Question 7

How would you rate the accessibility of devices and technology (‘Digital equity’) within your school as related to student learning?

Promisingly, 73% of schools believe that there have been no issues with access to devices and technologies within their schools this year. This percentage matches the 73% of schools that supply devices to students (see Q1), which suggests that a policy of providing devices pays off when it comes to the issue of digital equity.

For 23% of schools, there are slight accessibility challenges for students; while for 4% there are significant challenges. In a year when teaching and learning moved online, any students who face difficulties in accessing the technology they need – be it devices, internet access, or applications – risk being left behind.





Question 8

What is your collaboration platform or tool of choice?

The majority of schools (71%) use Microsoft Teams to enable collaboration in virtual classrooms. Zoom is the next most popular, with 13% of schools choosing this platform.

It's clear that schools are opting for proven, global collaboration platforms backed by best-practice tools and policies for privacy, security and compliance. For schools that lack the internal resources to plan, design and implement their own cybersecurity solution, these collaboration platforms provide the reassurance that the platform is secure.

With more schools adopting collaboration platforms to supplement other modes of teaching, the pressure on campus networks will grow. With more students using these platforms at school, each campus will need a secure network with enough bandwidth to enable seamless connections. It could help to explain why, as per Question 10, we're seeing a growing investment from schools in networking and security.

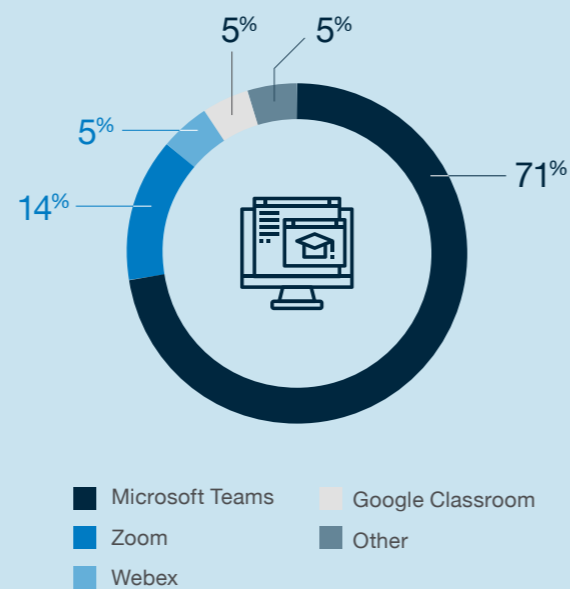
“

Respondent quote:

We were very lucky [as] we already used Microsoft Teams.

”

71% of schools use Microsoft Teams as their collaboration platform or tool of choice in the classroom.



- Microsoft Teams
- Zoom
- Webex
- Google Classroom
- Other



Question 9

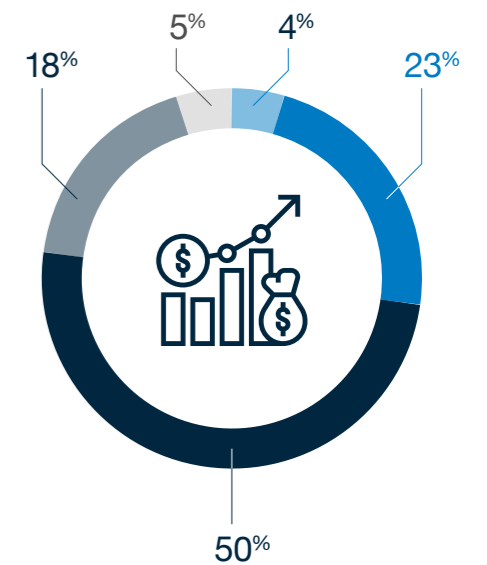
What impact do you think COVID-19 will have on ICT budgets in 2021?

The uncertainty arising due to COVID-19 – not to mention the economic cloud hanging over the country – has no doubt affected schools' budgetary decisions. In 2021, most schools will be tightening their belts and reducing expenditure in all budget areas.

Interestingly, only 27% of the schools in the survey have had their ICT budget reduced by budgetary belt-tightening. 50% of schools are sitting tight, with plans to keep ICT budgets in line with the previous year, while 23% of schools plan to increase IT spend.

The skew towards either maintaining or increasing the level of spending on technology reinforces general perceptions about the value of IT – it's clear that schools deem technology will continue to play an important role in school life.

73% of schools think that ICT budgets will either remain the same or grow in 2021



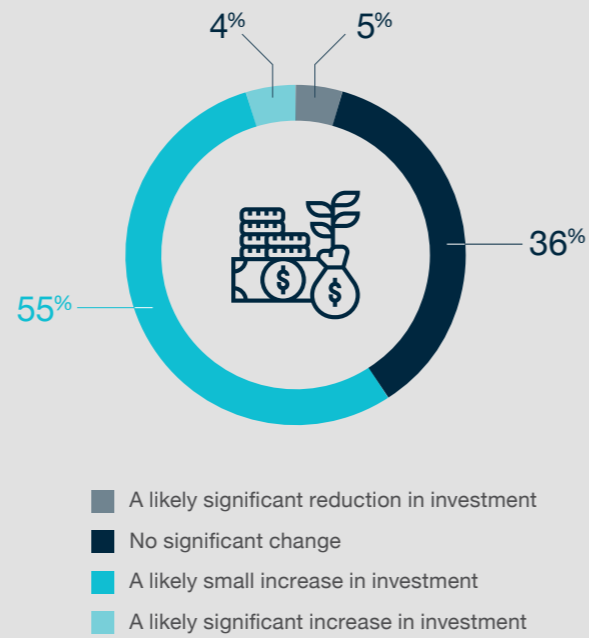
- Significant decline in overall budget
- Small decline in overall budget
- Budgets to remain largely the same
- Small increase in budget
- Significant increase in budget

Question 10

Do you expect to see further investment in your network and its security in 2021?

Drilling deeper into ICT budgets, it's clear that networking and security is a priority for schools. The majority (59%) expect to see an increased investment in these areas in 2021.

Having made it through the early days of the pandemic, these schools undoubtedly realise the importance that networking plays in this new hybrid world of classroom-based and remote learning. The year's swift shift to a digital-first model will have placed enormous pressure on many schools' networks. Moving forward, they are now prioritising ways to strengthen networks to ensure they're robust enough to manage any challenges that next year brings.



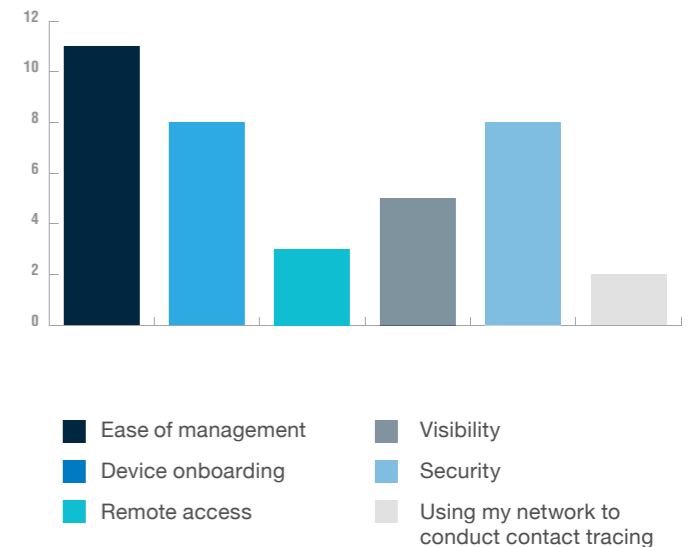
Question 11

What areas of your network are you interested in improving?



With campus networks now proving fundamental to the delivery of teaching and learning, schools are prioritising ways to get the most out of their networks. Ease of management is a top priority, with 52% of schools indicating that they seek a better way to manage networks. This makes sense: networks are becoming more complex, yet IT resources remain stretched.

Also important are security and device onboarding, with 38% of schools indicating that each of these is a priority area for them. On the security front, schools have experienced a huge increase in cyberattacks in 2020, with hackers making the most of the swift shift to remote learning. In June 2020 alone, 4.7 million malware incidents were detected in the education industry worldwide².



CONCLUSION

Based on the responses in this survey and wider industry reports, it's safe to say that technology has well and truly proven itself an invaluable component of education in 2020. The pandemic forced many schools to pivot to a blend of online and in-person learning, prompting the prioritised adoption of collaboration tools and other online learning platforms. This has led to an increased focus on networking and security – with many schools seeking help to ensure they get this right for the years ahead.

This is where Data#3 and Aruba, a Hewlett Packard Enterprise company, are here to help.

Aruba is a powerful, next-generation wireless network that can support fast, seamless digital learning, with trusted security at its very core. Data#3 proudly partners with Aruba in the education sector, helping schools implement Aruba's innovative wireless networking solutions to prepare for the opportunities that cloud, mobility and emerging technologies will deliver into the future.

To learn more about Aruba for education, contact Data#3 today.

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1. Microsoft. 2020. Three months later: What educators have learned from remote learning prepares them for the new school year. 2. Newham. 2020. Schools Already Struggled With Cybersecurity. Then Came Covid-19. [Online] Available at <https://www.wired.com/story/schools-already-struggled-cybersecurity-then-came-covid-19/>

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