

# Survey: Backup in Education

## How do schools deal with data backup? Is school data safe?



With increasing emphasis on holding records and portfolios of work electronically, Equinet was keen to hear more from schools themselves on how they currently protect and backup important data.

Backup is like an insurance policy. If your house burns down and you don't have cover, not only do you look silly but it's also a true disaster from every perspective. If your school suffers an ICT disaster, then the ramifications could be equally serious to head teachers, staff and pupils – and of course the school's reputation could be seriously damaged.

We created an online questionnaire in consultation with a number of Learning Grids including E2BN and NGfL. With nearly 500 responses from across the country we have a large enough sample from which to draw some interesting conclusions.

The respondents comprised 79% primary and middle schools; 19% secondary schools; and the remainder were special schools or those schools not fitting the other two categories. In terms of size

the average primary school size was 233 pupils with 33 PCs, 11 teachers' laptops and at least one server. As everyone would expect secondary schools are much larger. These averaged 990 pupils, 302 PCs, 68 teachers' laptops and five or more servers of various types.

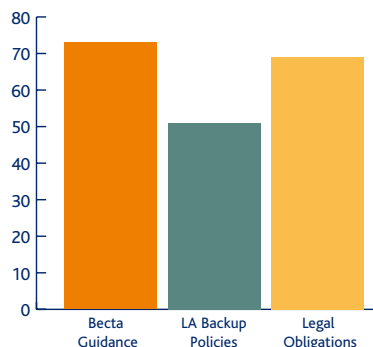
As current backup technology is very labour intensive we were interested to know how many ICT staff were available. In secondary schools the average in our sample was three full-time staff plus one part-time. Primary schools are less fortunate, with one in three having one full-time ICT specialist, and two in three having only a part-time specialist. As well as contending with the front line demands of keeping the ICT environment operational for the eLearning process, these staff need to find enough time to plan for, implement and conduct on a daily basis the needs of growing ICT

infrastructures and maintenance tasks – which include 'backup'!

We looked at what help and advice school ICT staff get as well as the detail of backup technology, procedures and practices in current use. The fundamental question we wanted answered was: "Are the right things in place to ensure school data is safe?"

*"We have so much data that requires backup that we have to prioritise because we cannot currently cope with the huge amount of data. We backup admin data daily. Students' data is backed up less frequently – weekly. Staff are responsible for the local data on their laptops. Their network areas are backed up weekly. Time and space is critical in the backup process."*  
Community College – Bedfordshire

## Policy and guidance – who hasn't seen it?



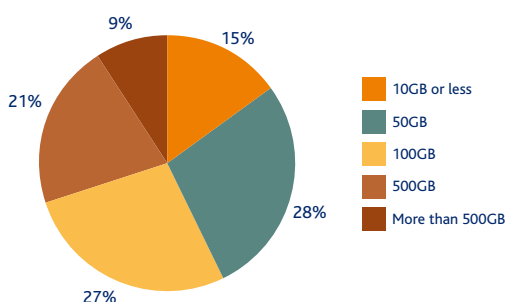
### Findings:

- 74% of schools haven't seen Becta guidance on backup.
- 51% don't know whether their LA has policies or advice on backup.
- 69% don't understand their legal obligations.

### Our Conclusion:

- Clear guidance isn't actually reaching schools.

## Size of data backups?



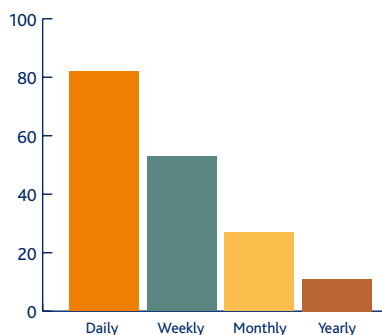
### Findings:

- Only 9% of schools questioned are backing up 10GB or less, and many primaries are backing up 50GB.
- Undoubtedly it's the secondary schools in our survey who are backing up 500GB and more.

### Our Conclusion:

- We think this will surprise many LAs who are claiming primaries only need to backup a few tens of megabytes.

## How often is backup undertaken?



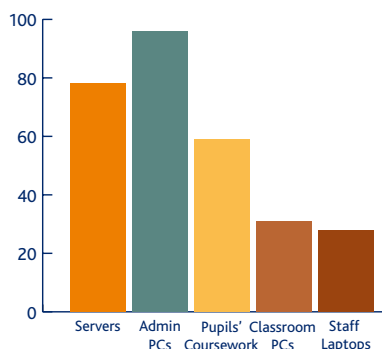
### Findings:

- Most undertake a daily backup but some only undertake a weekly backup.
- Only 11% attempt a rigorous programme of daily, weekly, monthly and yearly backups.

### Our Conclusion:

- Most schools only have the ability to recover data lost or corrupted within the last few days or weeks. Most schools cannot recover data lost a month or a year ago - how do these schools adhere to data retention obligations? See page 8.

## What types of data do schools currently backup?



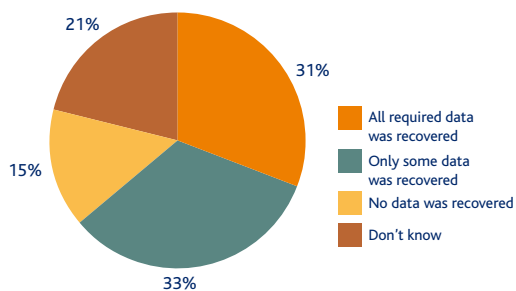
### Findings:

- The majority of schools do attempt to backup admin data.
- Not all schools backup their servers.
- 40% don't backup pupils' coursework.
- Only 28% attempt to backup staff laptops.

### Our Conclusion:

- As expected, admin data is often backed up, but not always. Teachers and pupils beware however – your work is at risk and is probably not being backed up!

## Recovery – how reliable is it?



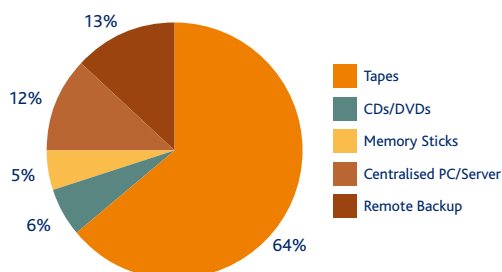
### Findings:

- Only 31% of recovery attempts were totally successful.
- In 33% of cases only part of the lost data was recovered.

### Our Conclusion:

- Our survey matches results from several others, showing at least 30% of recovery attempts fail completely. What other surveys have not shown is that a similar proportion are only partially successful. We continue to emphasise 'Recovery is everything!'

## Differing backup media and mechanisms



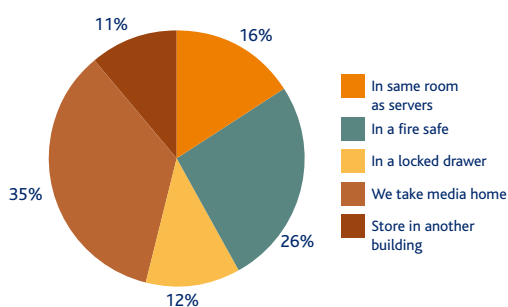
### Findings:

- Tape is clearly the most popular backup method.
- One third of schools rely heavily on ad hoc copying to servers, memory sticks and CDs.
- Remote backup accounts for 13%.

### Our Conclusion:

- Backup media and processes are not the best and the popularity of tapes probably explains why data recovery rates are poor. The use of remote backup, however, is starting to become significant.

## How securely is backup media stored?



### Findings:

- 54% of schools leave the backup media in the same building.
- 35% take the media home.
- 30% put the media with the server.

### Our Conclusion:

- It is quite disturbing that sensitive and important data

isn't handled correctly. Often backup media was left in the same building as the servers – sometimes in a locked drawer - which is obviously very poor practice. Even when the media was taken offsite this was mostly to an insecure location, usually someone's home!

*"I cannot stress enough the importance of daily backups!"*

Primary School  
Gloucester

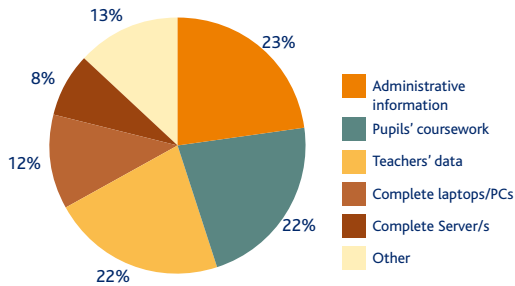
*"There needs to be more information available to schools about different backup solutions/disaster recovery. I have had to trawl the internet for information on what I should be doing."*

Secondary School  
Glastonbury

*"I really think that tape backups are so dated and maybe Local Authorities should look at other more reliable ways of backing up."*

Primary School  
Reading

## What data have schools lost?



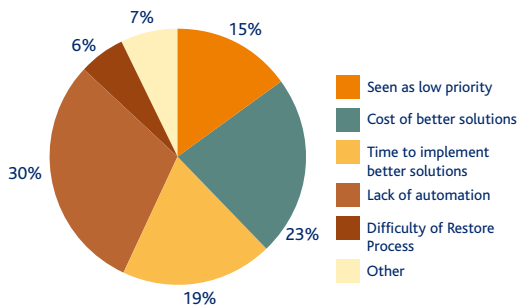
### Findings:

- 20% of schools have lost all the data on a server or laptop at some point.
- Other data lost in fairly equal proportions is admin, teacher and pupil.

### Our Conclusion:

- No surprises here. All types of data get lost or corrupted.

## Main barriers to better data backup



### Findings:

- 42% think time and money is the main barrier to implementing better solutions.
- 30% think lack of automation with current solutions is the main issue.

### Our Conclusion:

- Modern solutions such as Equinet's BackupPilot are totally automatic and offer excellent long-term value.

# Conclusions

In answer to our fundamental question "Is school data safe?" then the answer in the majority of schools we sampled, is possibly not. Our conclusion is that procedures, practices and backup solutions employed in some instances, fall far short of what is desirable or sensible and some schools will undoubtedly suffer as a result to some extent.

In fact we collected much more data than we have presented here, but for clarity have drawn out the top three findings:

- Probably the loudest request from those involved with the ICT infrastructure in schools is for deployment of backup solutions that focus on "Automation, Automation, Automation!" Backup solutions must regularly and reliably work without human intervention. It's unacceptable that if someone is off ill or forgets that backup doesn't get done.
- Another "weakest link" element is that having undertaken a backup, many schools leave the backup media in a vulnerable place. This includes storage in the same room as the servers – so not only would the server potentially go up in smoke, so would the only backup. Truly secure offsite backup isn't occurring either. For many schools, tapes or other media are being taken home by ICT staff or teachers – which cannot be regarded as suitably secure.
- The third area of most concern is teachers' laptops – they just are not being backed up. In many schools the approach is that it is the individual teacher's responsibility to undertake backups. This we think is abdicating responsibility – it's never going to happen. Automated systems, suitable for laptops and teachers, need to save data securely and automatically.

The survey also uncovered that some 10% of schools are already deploying or planning to deploy 'Remote Backup' technology.

We at Equinet believe we have something unique with BackupPilot - combining both local and remote technology - a solution that goes way beyond ordinary remote backup. On pages 10-11 we show that in addition to being technically superior, our solution is also more cost-effective.