



Access Control in educational premises

ASSA ABLOY

Can we afford to protect our
young people?

A discussion paper

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The global leader in
door opening solutions

Synopsis

The changing nature of the school and university 'ecosystem' in the UK, with developments such as Academies, Free Schools and rising tuition fees, has many implications, including consequences for the safety and security of students, staff and the public.

At the same time, the legal consequences and reputational issues arising from any failure to protect and secure people, physical assets and information data, are increasingly severe.

Rapid advances in technology, especially internet or smart phone enabled devices, means there is a plethora of potential solutions for each security challenge, but the fact the choice is so wide may, in itself, be a problem for time constrained educational managers.

Finally, these changes are taking place against a backdrop of severe public sector financial constraints, with further "real term" cuts in expenditure over the next 3-5 years. This means the competition for those scarce resources, time and money, is fiercer than ever.

The question therefore is simple: how do we afford to protect our young people adequately in educational premises today?

The answers are complex and challenging but the issue is one of real importance and by producing this Discussion Paper, ASSA ABLOY wishes to stimulate debate and encourage views and contributions from many voices.

To contribute your opinion, experience or comment please visit: www.facebook.com/ASSAABLOYUK

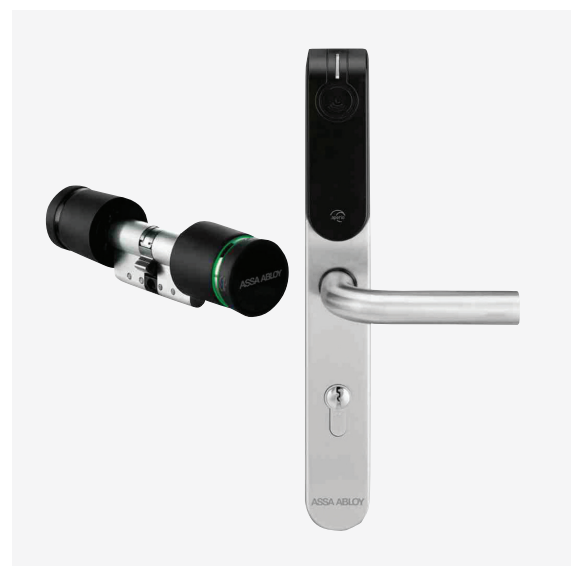
About the author

Matt Thomas is a Civil Engineering graduate from Loughborough University and holds an MBA from London Business School. He has worked for ASSA ABLOY since 2008 and currently holds the position of Managing Director of ASSA ABLOY Access Control.

About ASSA ABLOY Access Control

The ASSA ABLOY Access Control business was set up in 2011 to bring new technologies developed by the ASSA ABLOY group to market. Currently the award winning, and rapidly developing, Aperio™ technology is a main focus.

The award winning and rapidly developing Aperio™ technology



The purpose of access control in educational premises

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At its most basic level, access control is a system for enabling or preventing people from entering or exiting a location, whether a whole site or a single room or cupboard.

A secondary function may be to record the movements in and out of locations and provide a data trail for audit, traceability, compliance or improvement purposes.

The majority of access control systems rely on the person or asset transiting in or out of a location being recognised and validated, usually by a “credential”. This credential may be something the person has (key, card, identification tag), something they know (password, PIN) or something intrinsic to them (biometric data such as iris recognition, fingerprints).

In many systems, more than one layer of credential may be required and some systems require a second party credential (second keyholder, visual recognition by an approved inspector via CCTV link).

The more layers and sub systems, the greater is the complexity of integrating the systems and storing, accessing and making use of the data.

Within educational premises the drivers for access control are:

- Safety of students, staff and authorised visitors
- Legal compliance and statutory duties placed on Governors, School Heads, Local Authorities and other bodies.
- Protection of valuable assets
- Security and protection of data gathered by the organisation and held on IT systems
- Managing and controlling security across different venues, sometimes at university level, spread across a city base.



The challenges presented by educational premises

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Educational premises by their very nature present a number of access control challenges, which may not apply to other public building or to private/commercial spaces. These include:

- The age group of the user population, which mitigates against using complicated systems and the need to consider all user groups, including people with disabilities
- The safety requirement for swift and safe egress in the event of fire or emergency
- The need to avoid a 'fortress' atmosphere to maintain mental health and well being for students
- The 'open' nature of many educational premises with either full public access or permitted group access increasingly required. The nature of the extended schools agenda, the use of 'after hours' school IT and leisure facilities by outside groups and the growing trend to 'cluster' various community services, such as health centres and local community policing, in an educational complex.
- At University level, the access requirements are extended to incorporate completely different facilities; such as the student union, library and accommodation, with the increased risk of loss of credential by students.
- The constantly changing timetable with greater use of facilities earlier and later in the day (breakfast clubs, study periods), at weekends and during holiday periods (universities hosting conferences and other commercial activities)
- The widespread campus like geography of many educational premises, often with public access running through the site (roads, rights of way, public footpaths) and the difficulty in establishing effective 'perimeter security' such as fencing/barriers.
- The age of many buildings, which can make repairs and modifications expensive and can make cabled systems problematic
- The skills and availability of non teaching support staff with the time and ability to implement and maintain an effective access control system, where success is often reliant on human behaviour and habitually following good practice (eg persuading pupils not to swop ID cards or credentials, quickly reporting lost credentials to the appropriate person)
- Avoiding complexity (eg avoiding the accretion of systems so that a user needs one credential for access, another credential to use equipment such as photocopiers/printers, and a third for access to cafeteria or library facilities)



Core issues in implementing effective access control

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For many educational premises, the core issues lie in three main areas: responsibility; understanding; and finance.

- **Responsibility:** One of the key issues is to establish the ‘responsibility chain’ for security matters. This particularly applies to schools that move from Local Authority supervision to having more autonomy under other models such as Academies and the new Free schools. In most schools, the legal responsibility will lie with the Governing body and the Head Teacher.

The day to day responsibility may then be devolved to a mix of teaching and support staff, including estates or property managers or bursars/administrators.

Finally, some aspects may be outsourced (manned guarding, managing CCTV) to private contractors and or involve local community police initiatives (knife crime prevention and use of search/wands etc)

Unless the responsibility chain is mapped, recorded and communicated, any access control system will fail at the first hurdle and in the real world, all of the above groups are busy, with multiple responsibilities and concerns, so sustaining security as an area of attention is challenging but essential.

- **Understanding:** Go to Direct.Gov, the government information site and enter “school security” and you will be referred to a useful and informative booklet “Managing School Facilities Guide 4: Managing security in schools. There is only one problem: the guide was issued in 1996 and technology and society has changed rapidly in the last 15 years.

Essentially, many educational premises managers lack a clear, independent and up to date source of guidance and advice on school security and access control.

This has two consequences: either security is ‘forgotten’ until a headline scare (gun attacks in a US or European school, surge in knife crime in the UK) or the organisation become over reliant on the specialist suppliers of security systems and equipment

- **Finance:** There is no question that financial constraints are now a major factor in decisions in all public sector organisations. In the remaining large new build education projects, on ‘green field’ sites, installing a purpose designed full access control system is still feasible.

However, if the organisation is looking to overhaul, renew or extend an existing system, the investment is competing with many other priorities.

At the same time, educational bodies would be unwise to ignore the offsetting financial risk of claims for compensation, which would be inevitable in the event of a serious security breach.

- **Student (Pupil) Experience:** Universities in particular are increasingly concerned about the quality of the student experience. With rising tuition fees and increased competition for places it is important that students not only feel safe but also can move freely around campus with a minimum of fuss. Properly designed access control systems will enhance the student experience.

Options and solutions

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Faced with this complex balance of competing priorities, how can educational bodies navigate an effective way forward, ensuring adequate security within the financial and technical parameters of their premises?

As discussion points, the following may provide useful indicators:

- Implement an up to date risk assessment using the free survey services provided by many leading access control providers and by engaging in a serious debate within the governing and management structure about the level of risks in different spaces /times.
- This risk assessment must start with the likely level, frequency and severity of threat to student security and safety, quickly followed by the safety and security of teaching and other staff, and then considering the security of other visitors and users of the site.
- It is important this risk assessment is informed by credible, relevant statistics and not by headlines, rumours, urban myths or local prejudices.
- Having identified the risks, consider the number of barriers or preventative measures that need to be implemented to provide the commensurate level of security. How long would each barrier take to be breached and how quickly would an alarm be raised and a response mobilised?

Finally take a hard look at the likely level of loss and the consequences. Whereas pupil security may be paramount and justify complex access control, it may not be justifiable in real terms to apply the same criteria to assets in the IT lab or sports centre however valuable.

Factor in the quality of the student (and teacher) experience by considering the ease with which secure movement can be achieved. How many different credentials are you considering (keys, pin codes, fobs, cards etc)

- Traditionally access control systems have secured only 20% of the doors. This number is increasing rapidly with the introduction of low cost wireless technology. This also has the effect of reducing the number of credentials in use if planned properly
- Select appropriate technologies. You may not need full access control functionality on all doors. Differentiate between the functionality you really need in different areas and significant cost savings can be achieved. Keyless institutions are now a reality
- Where a complex already has an existing access control system but which now needs to be extended to include new additions and extensions, this is now possible with compatible wireless technologies at low cost. But be sure you are extending the existing access control system rather than introducing a new one, you will avoid problems in administering the larger system and ensure the users experience is enhanced. By doing this you will avoid the need for full system replacement and hence achieve the extension of the access control system in a very cost effective manner.

Summary

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Access control in educational buildings, from primary schools to Universities, is a complex and challenging issue. However, by using the right technologies the complexity can be reduced which will increase levels of security and improve the experience of student and staff alike. The severe financial constraints in public finances does not necessarily prevent educational institutions from employing these technologies as they can be installed at low cost and actually reduce running costs.

Hopefully this paper will start a debate and discussion and raise awareness of the issues and some of the possible solutions. Please add your voice to the debate.

Action Point:

To add your voice to the debate, please visit www.facebook.com/ASSAABLOYUK and share your views and opinions.

Thank you.



Appendix 1

ASSA ABLOY is leading provider of doors solutions used in many access control systems

Aperio™ is a new global ASSA ABLOY Access Control technology that enables mechanical locks to be wirelessly linked to a new or existing access control system without any need to modify the door.

The heart of Aperio™ is a short distance wireless communication protocol designed to link an online electronic access control system with an Aperio™ enabled electronic cylinder or escutcheon.

This means that:

- Additional doors can be integrated into access control systems at a low cost
- Aperio™ can be combined with new and existing access control systems
- Easy to install with no structural alterations to the door
- Standard RFID technologies are supported
- Battery-operated Aperio™ cylinders and escutcheons provide an RFID-Card reader
- Aperio™ can update room access authorisations online and in real time

The open architecture of Aperio™ provides a convenient way of connecting with most access control systems via RS485, or Wiegand interface. The Aperio™ cylinders or escutcheons communicate via an encrypted wireless link to a communication hub that is wired directly to the system. Recent enhancements mean the hub can now facilitate a link from one to eight locking devices at any one time.

Aperio™ locking technology is also able to upgrade master key systems to instantly introduce access control convenience to any premises.

The ability to integrate into an existing access control system, provides end users with a high quality and secure solution, with all the benefits of access control where it is required.

By utilising Aperio™ in this way, requests for access control can be achieved, whilst retaining existing card credentials and removing key control issues, providing an overall cost effective solution, with minimal modification to doors and premises.

Aperio™ can be used to develop a truly bespoke cost effective security solution, which is quick and easy to install, that offers the additional convenience and flexibility inherent with an access control solution, whilst also solving key management issues.

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