



impro technologies®  
ACCESS CONTROL

# Top 3 trends in the world of **ACCESS CONTROL**



Executive **BRIEF**



Access control remains a key defence for most organisations, whether large or small. Since the inception of the industry in the 1980s, there hasn't been a revolutionary jump such as with mobile phones – many will remember having a variety of devices, such as a camera, music player, phone and game console which are now contained within one small mobile device, that happens to also be a telephone.



However, this is changing rapidly as the industry adopts new technologies and changes the way we think and use physical access control.



# 1 trend

## It's a mobile world

Today two-thirds of the world's population, or five billion people globally, have a mobile phone connection\*. The adoption of this technology has changed how we do business and is no different in access control. We already use our mobile phones for so many tasks and it's assured that the users' device is always within reach, making it an ideal tool for access control.

Today management systems can be accessed anywhere in the world, 24 hours a day, through a smart phone, tablet or computer.

Add the ability to access the system without specialist software, just an internet page with all the security and encryption automatically managed, and end users have unrivalled levels of convenience and peace-of-mind.



Given the prevalence of mobile phones, the next element is for the phone to become a credential. No more tags and cards. Through AES128 encryption, a credential can be virtually created on a mobile phone enabling authorised personnel to access the building simply by presenting their phone. This removes the risk of cloning and

reduces the loss of tags, as people are very aware if they've lost their phone.

When a phone is lost, or a person no longer has permission to enter, the credential can be revoked immediately making access to the premises with the virtual card impossible.

\* GSMA Intelligence, Global Trends 2017



# trend 2

## Access control as a service

The internet, mobile devices and ever expanding cloud services, will change the traditional deployment of access control. The world is demanding increased convenience, security, privacy and cost reduction. Access control as a service (ACAAS) can enable this.

The management software is run directly from a web browser, whilst all the elements of the software such as security protocols, virus protection and firewalls, along with the servers and guaranteed runtime, are managed by the vendor.

This removes large capital investment demands, the requirement for highly skilled personnel and, more importantly, the complexity for end-users who can simply focus on their business, while the vendor takes responsibility for the system.

Further, ACAAS transcends the limitations of a company's typical



IT infrastructure, as users can store and access the data in a way most convenient and easy for them, without the limitations of their internal IT infrastructure.

Naturally the encryption and security of data on the internet is crucial, along with increasing global privacy regulations. The encryption must be an open, internationally adopted and recognised standard, such as MQTT and Rabbit MQ. By ensuring open standards, used by global internet organisations such as Microsoft, Amazon, Google and other such names, access control benefits from consistently evolving security from global players.

The risk of selecting a proprietary encryption for a cloud service, is that only one company is managing, evolving and developing that platform, which immediately increases the risk.

With high level encryption, the data is protected and privacy ensured. The protection of privacy, whilst not as stringent in South Africa, is certainly a massive concern internationally and again, this is protected through the ability to utilise microservices architecture for access control. This results in user data always residing in the country of origin, thus ensuring legal compliance.



# trend 3

## Wireless freedom

Historically access control has been a wired system, but this is rapidly changing as price and reliability are improved.

In the past, users wanting the convenience of wireless locks had to operate two individual systems – one for locks, one for access. Today this is a thing of the past as technologies merge and integrate.

Wireless locks are now seamlessly integrated into the access control system, just like other hardware and services. This provides a single portal for the user to enrol and control their premises.

They also address the golden mantra of “convenience”. Wireless locks are ideal for installations where traditional wiring may be difficult to reach, or for buildings where cosmetics and aesthetics are important.

Another facet is the ability to put electronic access on more interior doors, to provide greater security, as well as on non-traditional openings such as server racks, lockers and cabinets.



Add a mobile credential to that wireless lock and it's becoming frictionless. No touch necessary.

Wireless doesn't just extend to the front-end of the hardware though. What about beyond the reader?

One of the biggest expenses and time consuming elements is installing metres of cabling throughout a building, to connect the different elements of the access control system. However, it's not as easy as simply making the controller communicate wirelessly to server – what if the connection is affected in some manner? This would result in the access control system being inoperable and people unable to gain access.

Wireless must have fail-safe mechanisms.

The wireless solution can operate between the controller and server, but the controller must have the intelligence and autonomy to operate seamlessly should the connection be lost.

This ensures that the controller can continue operating the prescribed rules, without a server connection – meaning people can still come and go, as authorised. When the connection is resumed, the controller is able to synchronise back to the server, providing all the required data and transactions.



**Impro Technologies**  
has over 30 years' experience  
in the access control industry

HQ tel: +27 (31) 717 0700  
Email: [info@impro.net](mailto:info@impro.net)  
Web: [www.impro.net](http://www.impro.net)