

ATTACHMENT C

Preliminary Disclosure Of Asserted Claims And Infringement Contentions For U.S. Patent 11,373,474 (the “’474 patent”)

*LIBERTY ACCESS TECHNOLOGIES LICENSING LLC v. ASSA ABLOY AB ET
AL.*

E.D. TEX. NO. 2:22-CV-507-JRG-RSP

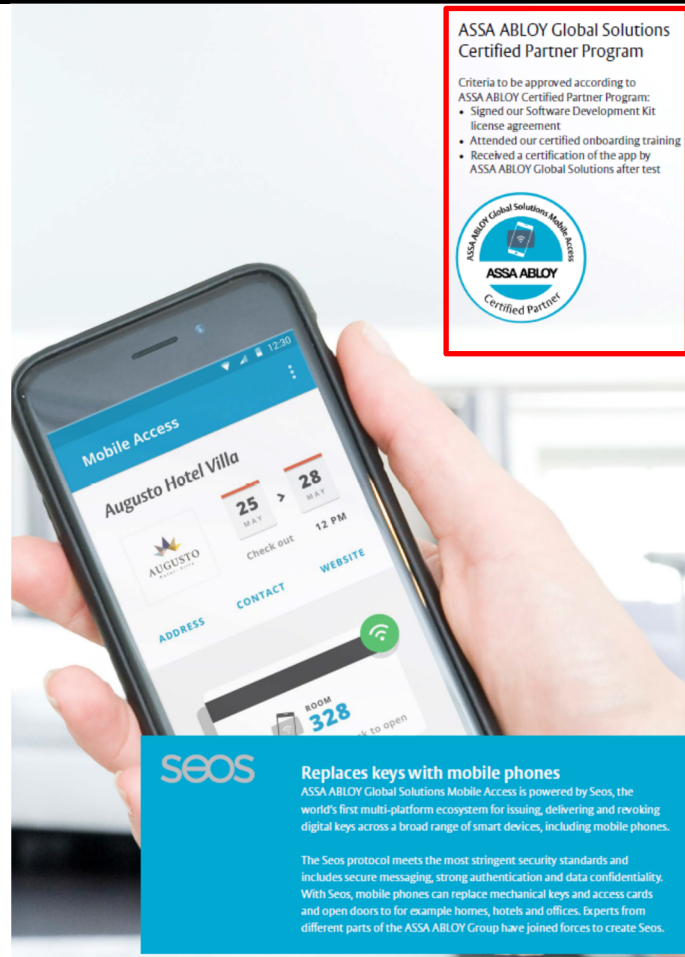
It should be understood that other products and services not discussed directly may also infringe. Discovery has just begun, and to date, Plaintiff Liberty Access Technologies Licensing LLC (hereinafter “Liberty Access”) has received only limited technical information and documents from Defendants ASSA ABLOY AB, ASSA ABLOY Mobile Services AB, and ASSA ABLOY Global Solutions AB (collectively, “Defendants”), nor conducted any depositions regarding the Accused Products (*i.e.*, Defendants’ products identified in the cover pleading served with these charts). Liberty Access reserves the right to amend or revise its infringement contentions, including the possibility to allege infringement by any of the Accused Products as set forth herein under the Doctrine of Equivalents in the event that anything identified herein is found later to not literally meet the requirements of any claim element. Liberty Access reserves the right to assert additional infringement contentions related to any claim, product, and/or service at a later date against Defendants.

Claim 1	
1. An access control system comprising:	ASSA ABLOY AB, ASSAY ABLOY Mobile Services AB, and ASSA ABLOY Global Solutions AB (“ASSA”) make, use (including via testing), sell, import, and/or offer for sale, and instruct their subsidiaries, affiliates, and end users to use the ASSA ABLOY Global Solutions Mobile Access technology and associated App (“Mobile App”) feature as a key to a hotel room by using, among other technologies, integrated SEOS technology (which “Replaces Keys with Mobile Phones”), VingCard Classic Electronic Locks and VingCard Essence Electronic Locks and associated Bluetooth readers including, but not limited to, Bluetooth Low Energy readers, and processors included therein, and the associated hardware, software, applications, and functionality associated with this product and solution (hereinafter, the “Accused Products”), constituting an access control system for controlling door locks at hotels.

Claim 1	
	ASSA ABLOY Mobile Access Solutions Brochure, p. 1 (the “Mobile Access Brochure”). ASSA also instructs and encourages others to use its Mobile Access Software Development kit (SDK) as integrated into their hotel customers mobile applications, which provides substantively identical features and functionality as the Mobile App.

Claim 1	
	 ASSA ABLOY Global Solutions Mobile Access App This is our own ready-to-use, off-the-shelf solution. The app suits hotels that want to provide basic mobile access solutions to their guests in a simple to use format. There are no integrations or third-party dependencies required. We publish a general app that is available in the App Store and on Google Play. Through an administration portal, hotels can customize their digital key graphics to reflect company branding or design. This will then show in a "Passbook" inspired style for the hotel to use.  Customer Integration This solution is created for hotels with their own app initiatives that want to integrate mobile access into their own apps and back end systems. <u>ASSA ABLOY Global Solutions provides a Mobile Access Software Development kit (SDK) together with dedicated onboarding services to facilitate seamless integration.</u>  Third Party Certified Partner App This solution suits hotels that want mobile app functionality beyond just access control, but don't yet have their own in-house app initiatives. <u>They can here pick a solution from one of our selected app specialist partners, who through our Certified Partner Program already have integrated our mobile access functionality into their products.</u> Mobile Access Brochure, p. 4.

Claim 1

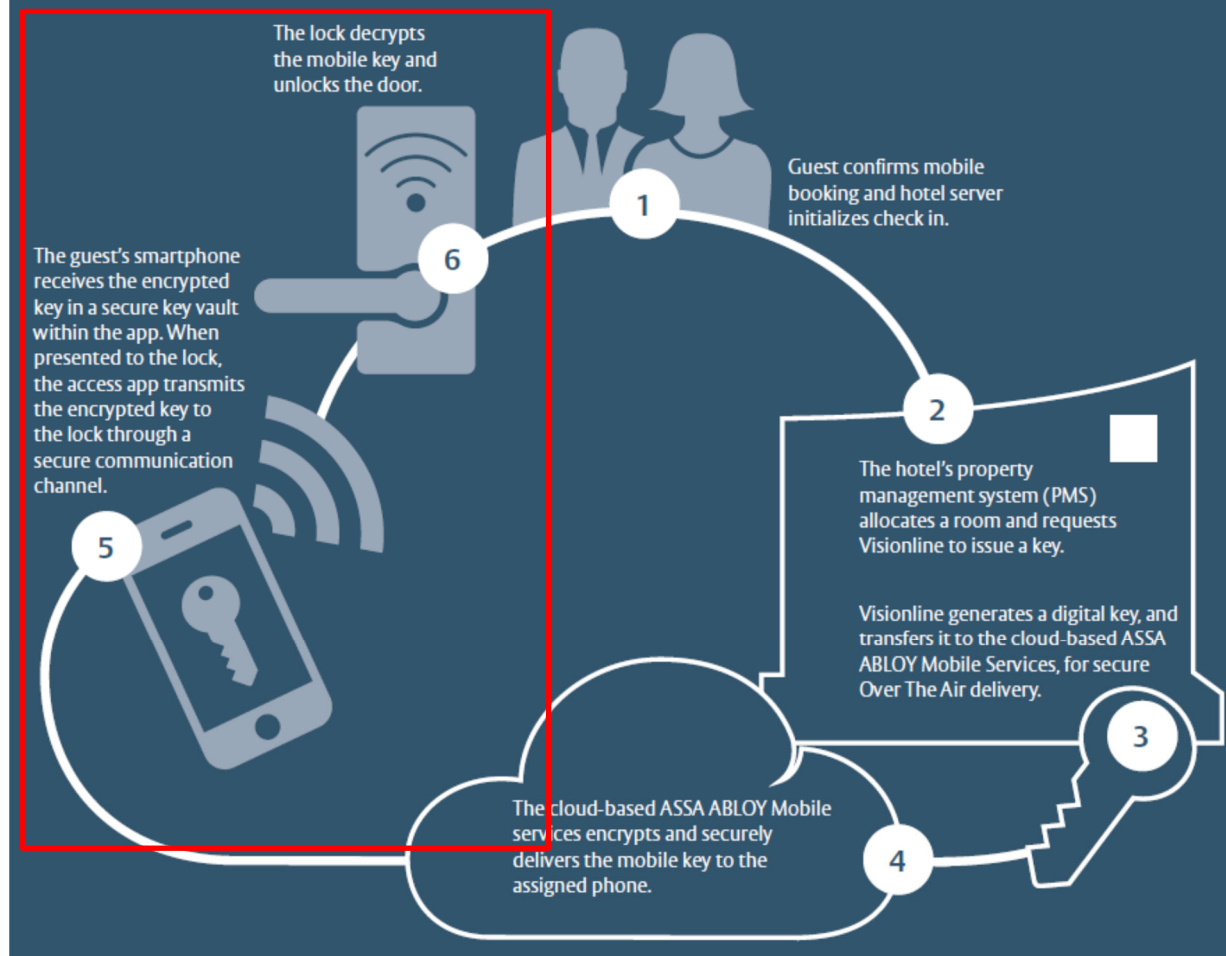


Mobile Access Brochure, p. 5.

Claim 1	
an access device comprising a communication module connected to a processor having control of a door lock;	ASSA's system includes and/or uses (and ASSA instructs end users to use) an access device comprising a communication module connected to a processor having control of a door lock. ASSA's system comprises an access device that includes a communication module, such as a Bluetooth communication module, to communicate with an application operating on a smartphone. The communication module is connected to a processor having control of a door lock of a hotel room door to allow locking/unlocking of the door lock.

Claim 1	
	 After ensuring that the Bluetooth is enabled, <u>the guest simply holds the smartphone to the door lock, waits for the solid green light and enters the room.</u> Mobile Access Brochure, p. 6.

Claim 1



Mobile Access Brochure, p. 9.

Claim 1	
	Lock system The latest generation of VingCard's RFID locks Classic, Signature, Essence and Allure are all compatible with Mobile Access. The only thing needed is to add a small Bluetooth Low Energy board to the lock.  Classic RFID Signature RFID Essence Allure Even with older versions of lock systems it's possible to install Mobile Access. You can keep most of the lock hardware and just upgrade the reader electronics to the latest RFID version and add the Bluetooth Low Energy board. Software The latest version of Visionline is needed together with a Mobile Access license option. It connects securely to the cloud-based ASSA ABLOY Global Solutions Mobile Access services. Mobile Access Brochure, p. 8; <i>see also</i> Website (https://www.assaabloyglobalsolutions.com/en/hospitality-solutions/electronic-locks-for-hotels)

Claim 1	
	Step 3: Activate Mobile Access Without replacing existing hardware and with the addition of a Bluetooth Low Energy (BLE) reader, your property and guests can seamlessly begin to enjoy the contactless benefits of the technology. https://www.assaabloyglobalsolutions.com/en/hospitality-solutions/mobile-access-for-hospitality/rfid-upgrade

Claim 1

Mobile Access Made Easy 2020

ASSA ABLOY Global Solutions Mobile Access

John Doe Operator

Press **Esc** to exit full screen

Augusto Hotel

Reservations

Building status

New reservation

Room number

3609

Reference

booking

Check in

2020-07-06

Check out

2020-07-10

Add guests

New guest

Name

Jane Doe

Email

janedoe@mail.com

Common rooms

+ Add guest

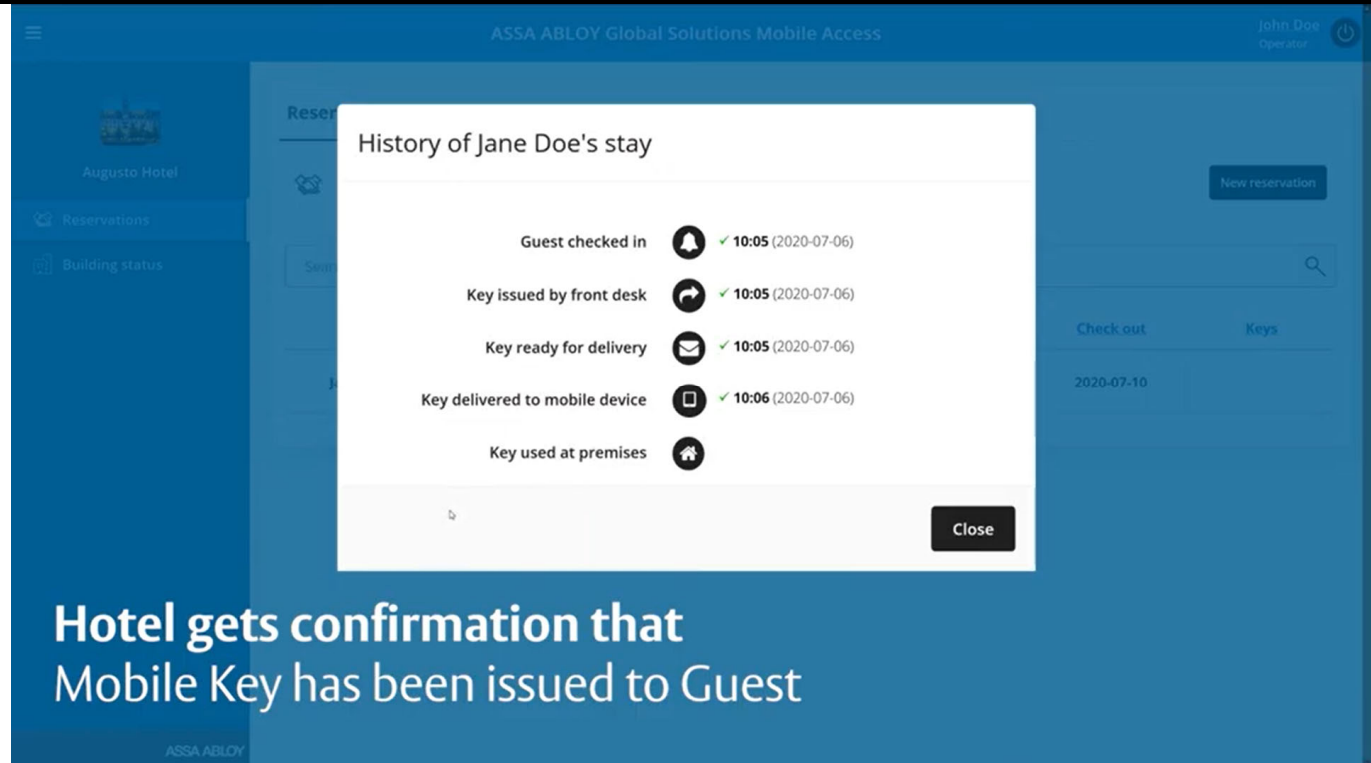
Cancel

0:28 / 1:15

Scroll for details

<https://youtu.be/YYvYMml-rj8>

Claim 1



<https://youtu.be/YYvYMml-rj8>

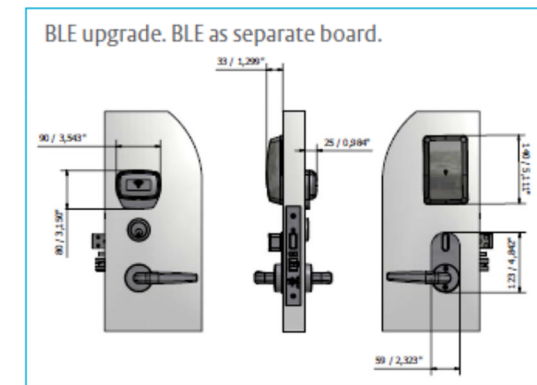
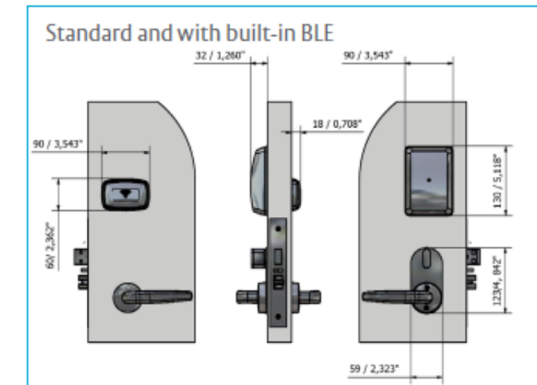
Claim 1

FEATURES

- : EPD (Environmental Product Declaration) certified
- : Supports the latest RFID technology
- : Supports Mobile Access
- : Online compatible
- : Easy upgrade from Signature Magstripe or Combo
- : Fire listed for use on fire doors (UL, BS, EN)
- : Case hardened full 1-inch (ANSI) throw deadbolt
- : Panic release function – the deadbolt and latch are automatically retracted by inside handle for easy regress in emergency situations
- : ADA compliant (users with physical disabilities)
- : Stainless steel parts for mechanical strength, corrosion resistance and attractive appearance
- : Optional high security mechanical override cylinder
- : Detailed audit trail: 3000 events in offline mode (Vostio and Visionline version 1.24 and above) and unlimited number of events in online mode
- : RFID Specifications:
 - 13,56MHz technology
 - Compatible with the following standards:
 - ISO 14443 A (MIFARE including Desfire)
 - ISO 14443 B
 - ISO 15693

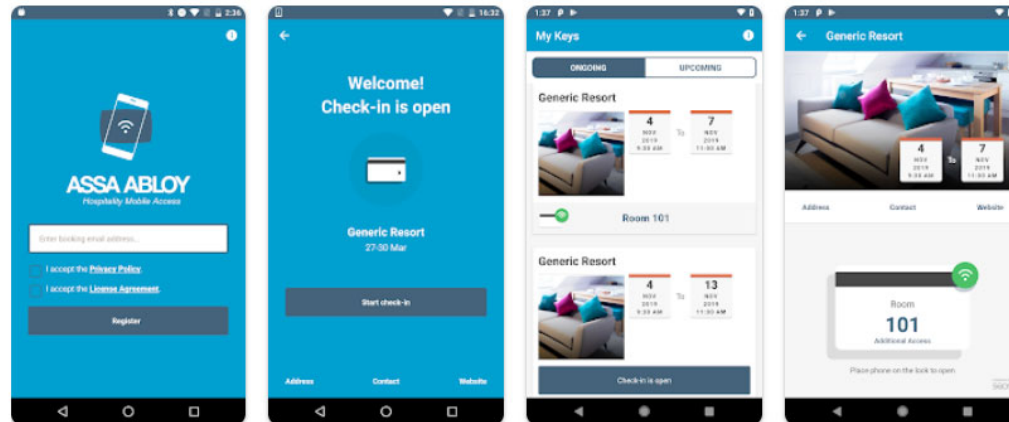
E.g., VingCard Signature RFID Product Sheet English, p. 1.

DIMENSIONS



Claim 1	
an application on a portable terminal; and	ASSA's access control system comprises an application on a portable terminal. ASSA's access control system comprises an app, including the ASSA Mobile App, that operates on a portable terminal, such as a smartphone.  ASSA ABLOY Mobile Access Solutions Brochure, p. 1 (the "Mobile Access Brochure").

Claim 1



About this app →

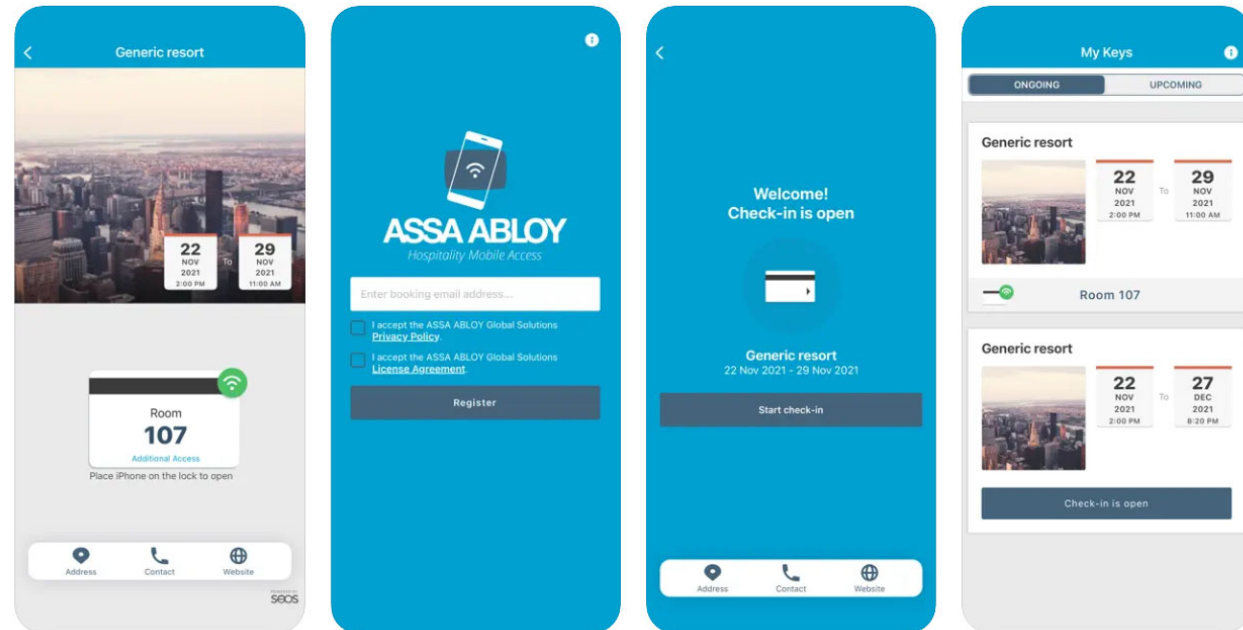
With ASSA ABLOY Hospitality Mobile Access you can check in to your hotel room before you arrive and receive your room key direct to your phone. When you arrive at the hotel, go straight to your room and open the door by holding your phone up against the lock. Your hotel key is securely delivered and stored inside your device and you don't need to worry about a keycard.

ASSA ABLOY Hospitality Mobile Access is available at select hotels around the world.

https://play.google.com/store/apps/details?id=com.assaabloy.hospitality.mobileaccess.hospitalitymobileaccess&hl=en_US&gl=US

Claim 1

Screenshots iPad iPhone



<https://apps.apple.com/us/app/hospitality-mobile-access/id1017290566?platform=iphone>

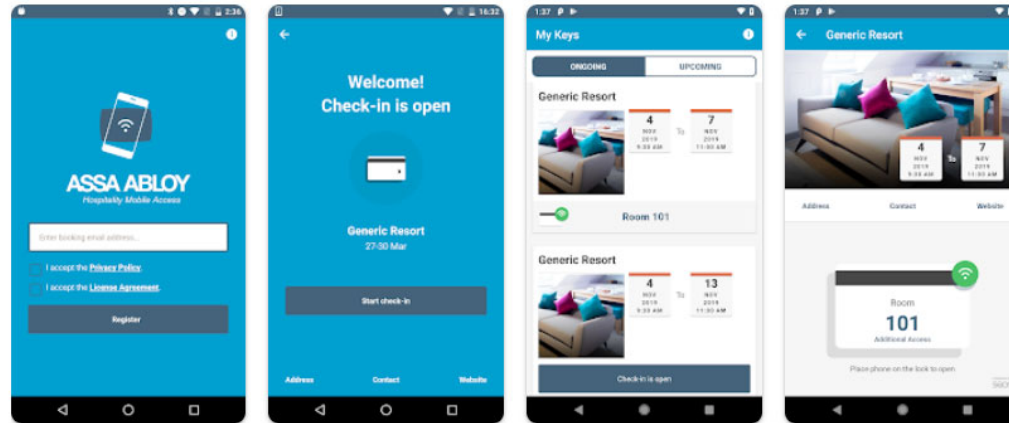
Claim 1	
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Claim 1	
	Unique User Experience Mobile Access offers guests a whole new hotel experience. Depending on the solution deployed they can reserve and book their room using their mobile phone or device. They can then use the phone to check in and check out. https://www.assaabloyglobalsolutions.com/en/hospitality-solutions

Claim 1	
	How It Works?  1 Download the application. 2 Make the reservation. 3 Check into the room. 4 Bypass frontdesk upon arrival and go to the room. 5 Open door with the use of mobile application / mobile key. https://www.assaabloyglobalsolutions.com/en/hospitality-solutions

Claim 1	
a server to provide a communication setting to the application, the communication setting corresponding to the access device, and to further provide a reservation certificate to the application, the reservation certificate comprising an interval of a reservation,	ASSA's access control system comprises a server to provide a communication setting to the application, the communication setting corresponding to the access device, and to further provide a reservation certificate to the application, the reservation certificate comprising an interval of a reservation. https://www.assaabloy.com/tr/en/stories/blog/assa-abloy-mobile-access-technology; <i>see also</i> https://www.assaabloyglobalsolutions.com/en/hospitality-solutions/mobile-access-for-hospitality/rfid-upgrade. ASSA's system includes a server to send a communication setting to the ASSA Mobile App, including the Bluetooth communication setting with which the ASSA Mobile App communicates with the access device. The server further provides a reservation certificate to the ASSA Mobile App. The reservation certificate comprises an interval of a reservation, such as the check-in date/time and the check-out date/time.

Claim 1



About this app →

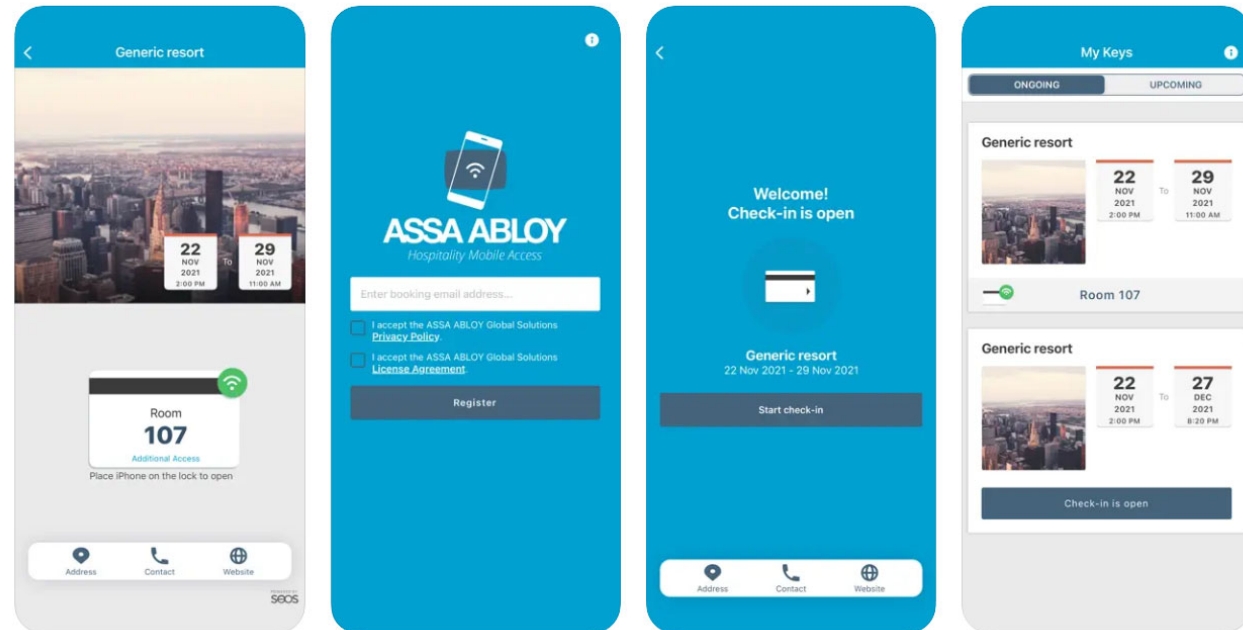
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ASSA ABLOY Hospitality Mobile Access is available at select hotels around the world.

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https://play.google.com/store/apps/details?id=com.assaabloy.hospitality.mobileaccess.hospitalitymobileaccess&hl=en_US&gl=US

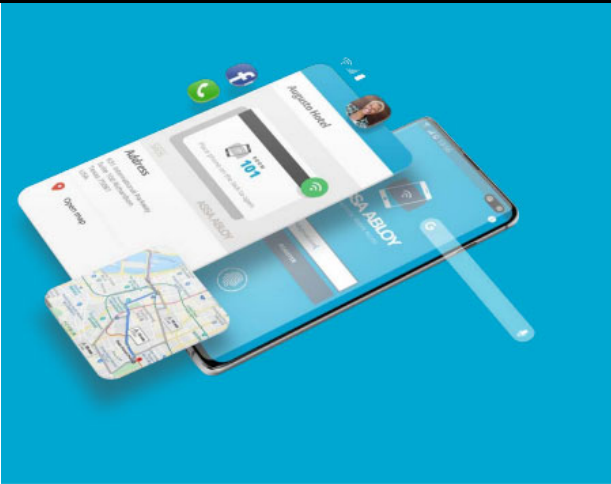
Claim 1

Screenshots iPad iPhone



<https://apps.apple.com/us/app/hospitality-mobile-access/id1017290566?platform=iphone>

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Claim 1	
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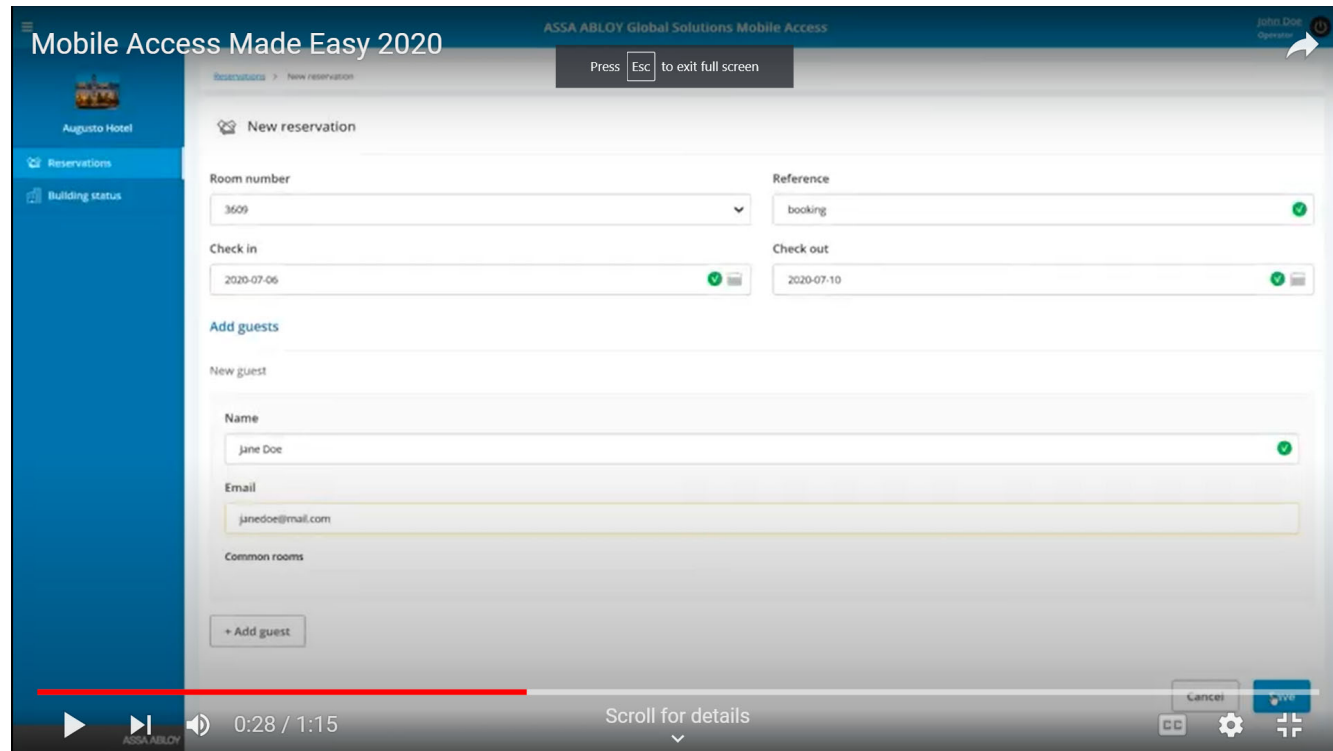
Claim 1

How It Works?

- 1 Download the application.
- 2 Make the reservation.
- 3 Check into the room.
- 4 Bypass frontdesk upon arrival and go to the room.
- 5 Open door with the use of mobile application / mobile key.

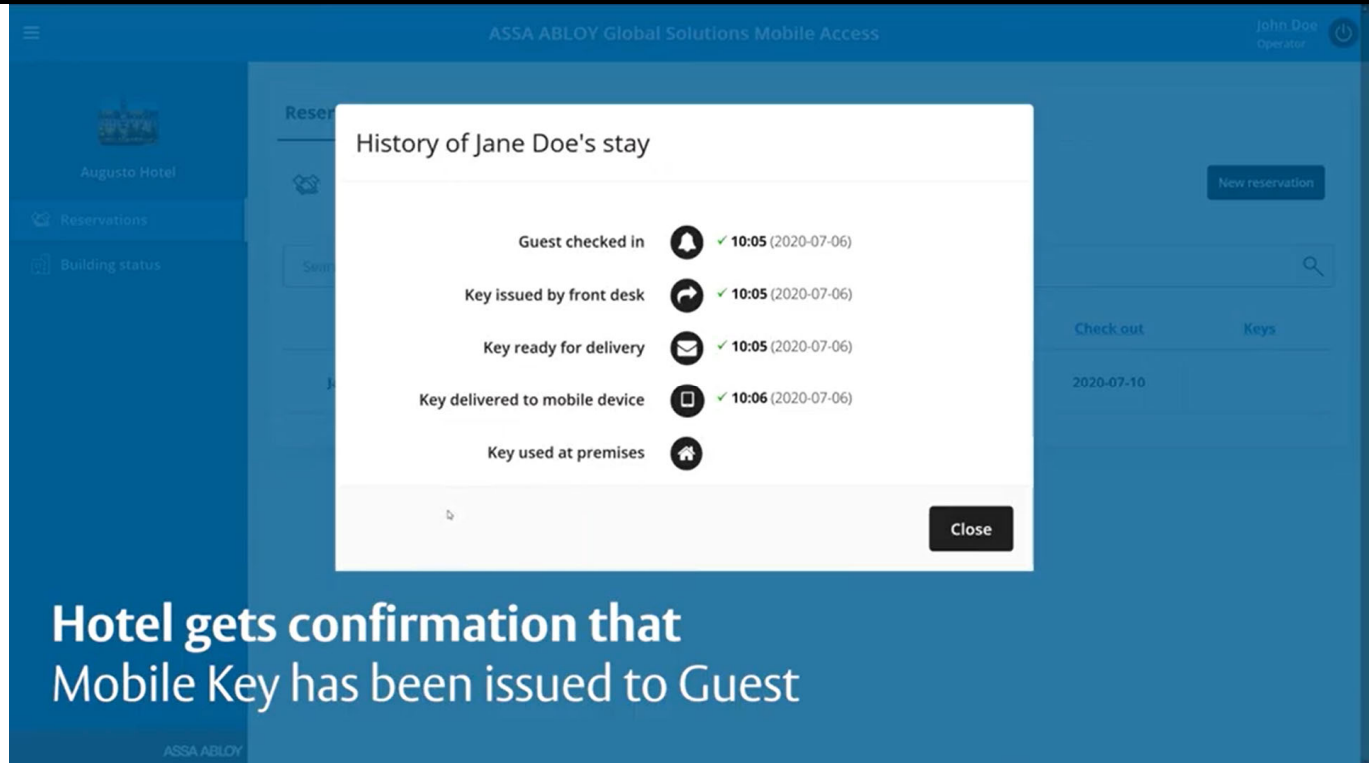
<https://www.assaabloyglobalsolutions.com/en/hospitality-solutions>

Claim 1



<https://youtu.be/YYvYMml-rj8>

Claim 1

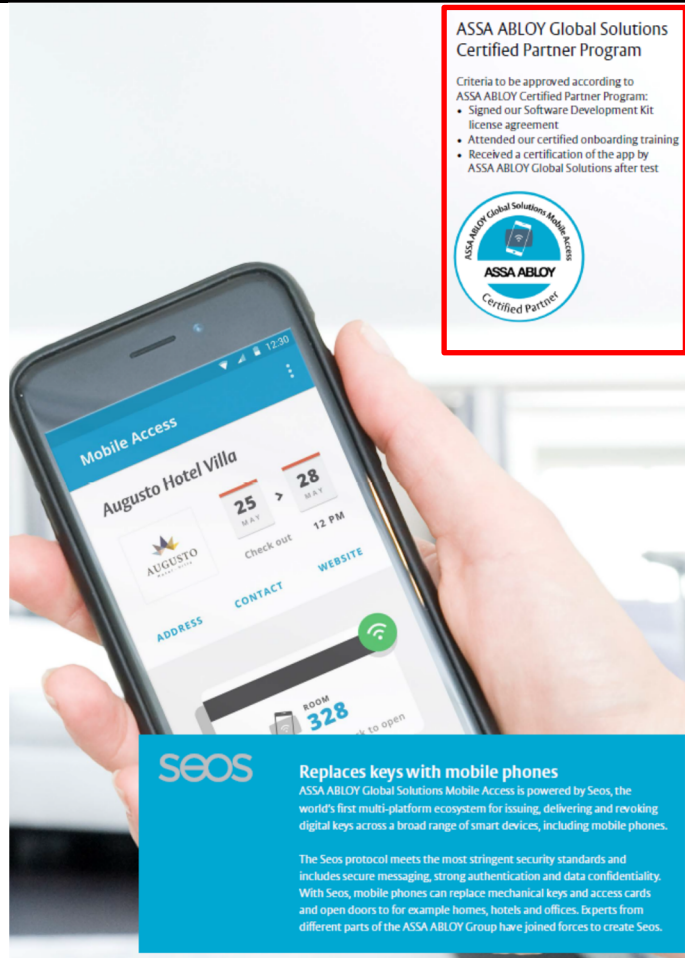


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Mobile Access Brochure, p. 4.

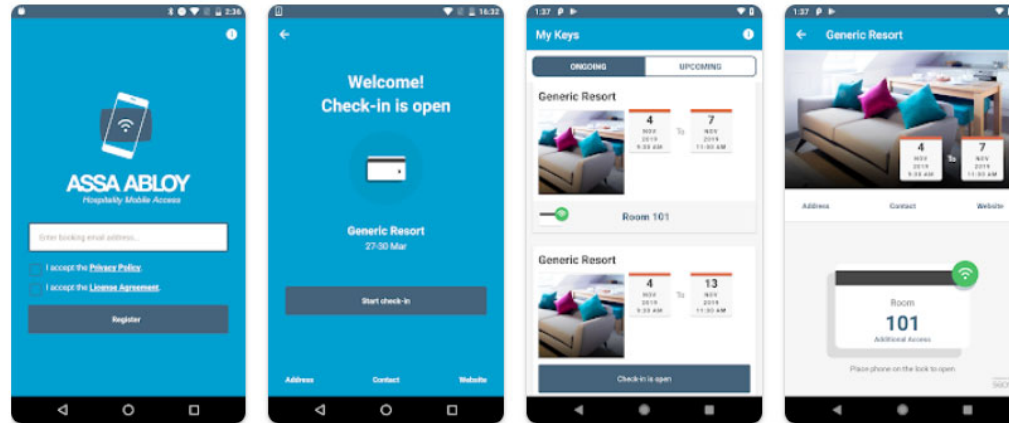
Claim 1



Mobile Access Brochure, p. 5.

Claim 1	
wherein the application compares the interval of the reservation to a current time accessible to the application to determine if the reservation certificate is current and wherein, the application activates the door lock by communicating with the access device via the communication setting when the application determines that the reservation certificate is current.	ASSA's access control system includes the foregoing application, wherein the application compares the interval of the reservation to a current time accessible to the application to determine if the reservation certificate is current and wherein, the application activates the door lock by communicating with the access device via the communication setting when the application determines that the reservation certificate is current. ASSA's Mobile App compares the interval of the reservation (such as the check-in/check-out date/time) to a current time accessible to the ASSA Mobile App to determine if the reservation is current. If so, the ASSA Mobile App activates the door lock (e.g., unlocks the door lock) via the Bluetooth communication setting.

Claim 1



About this app →

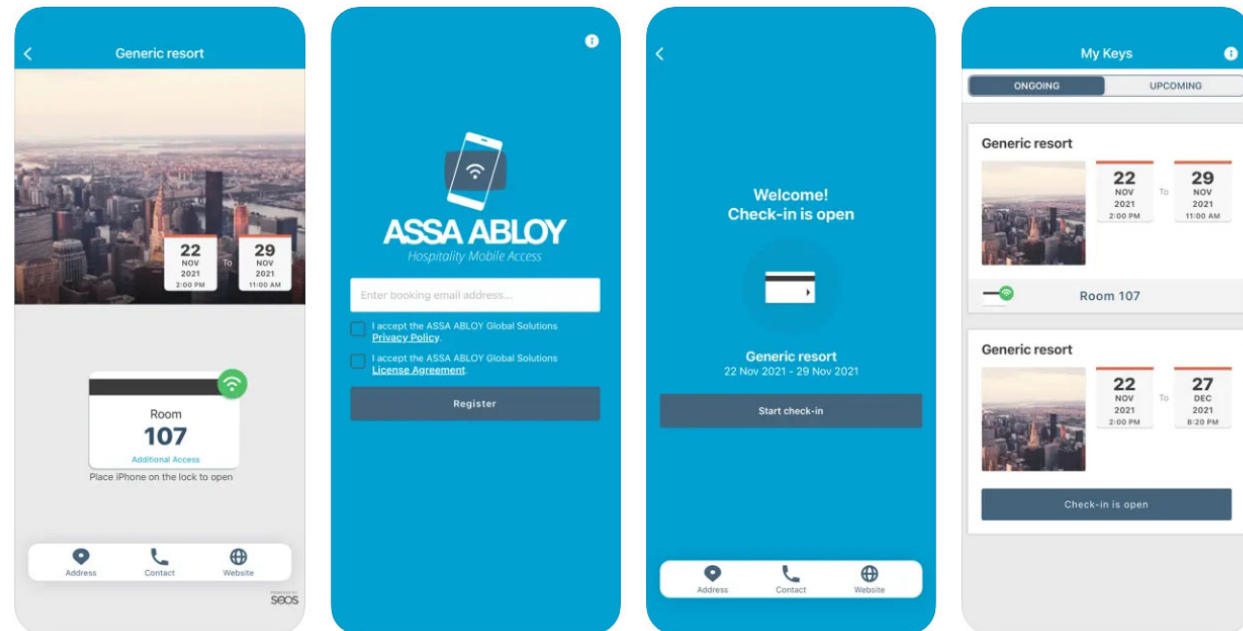
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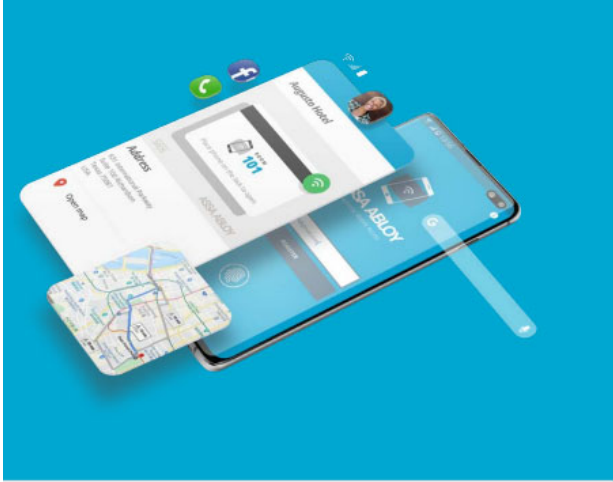
Claim 1

Screenshots iPad iPhone



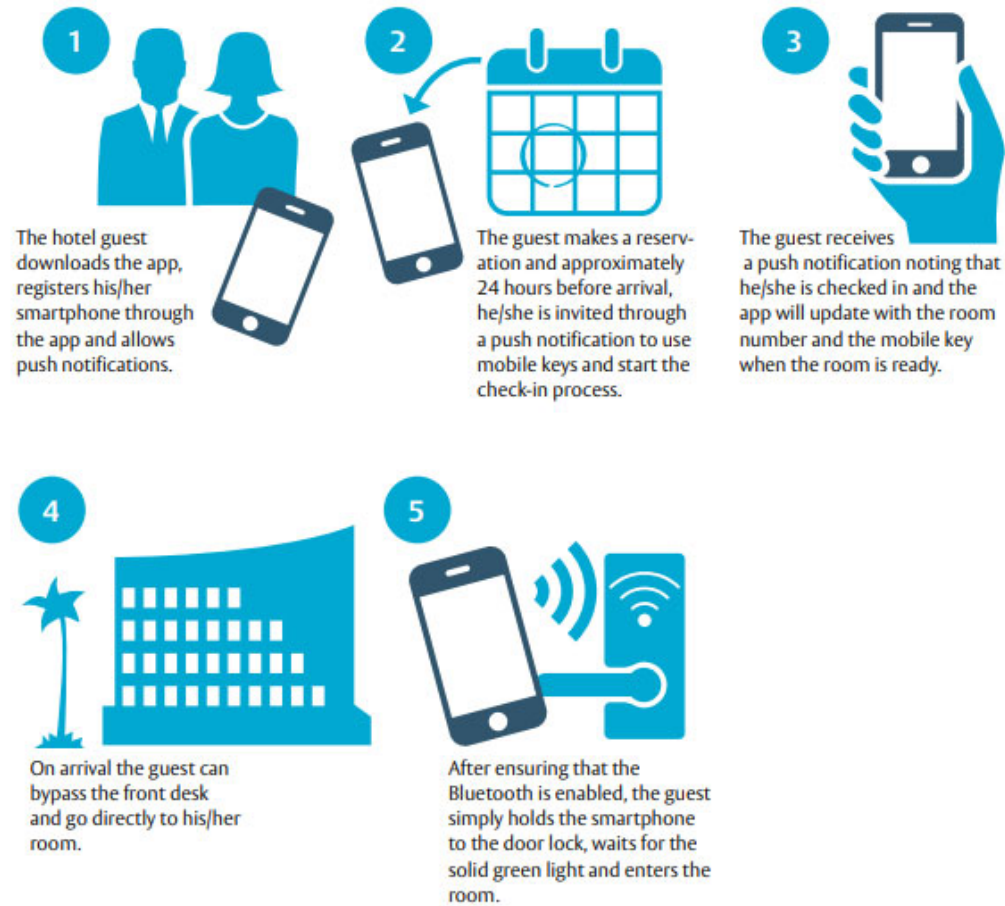
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Claim 1	
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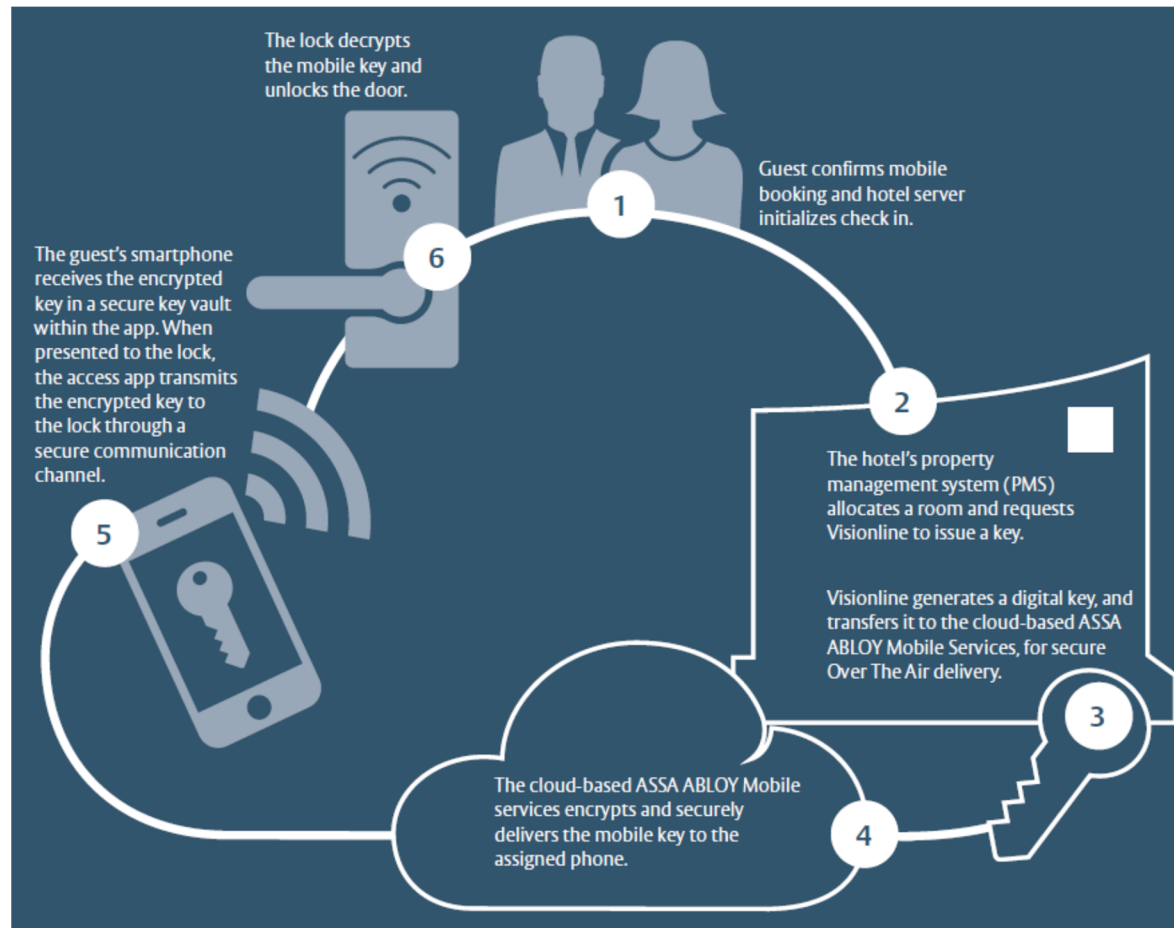
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Claim 1



<https://www.assaabloyglobalsolutions.com/en/hospitality-solutions>

Claim 1

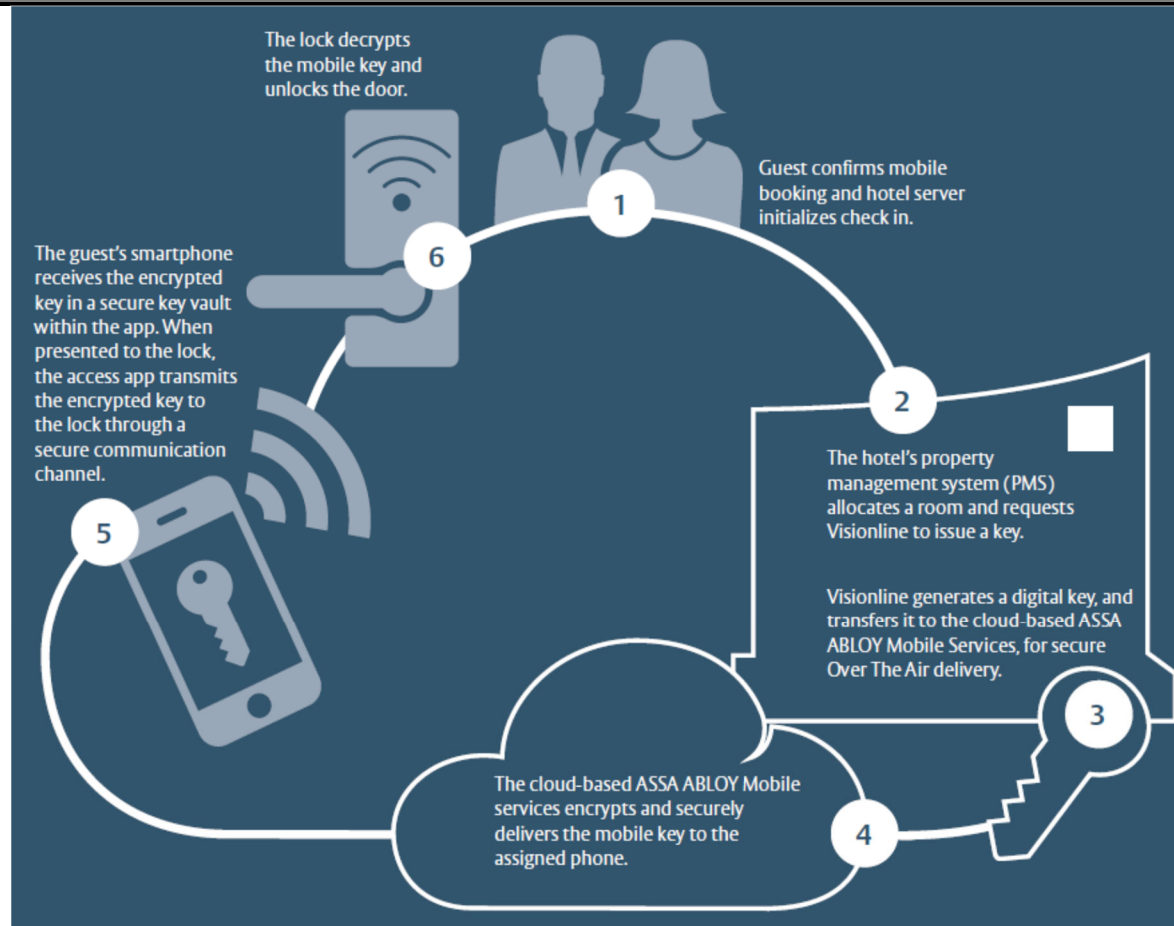


Mobile Access Brochure, p. 9.

Claim 1	
	HOW IT WORKS - PROPERTY PERSPECTIVE  The diagram illustrates a five-step process for mobile access from a property perspective. Each step is represented by an icon and a numbered description in a grey box: Step 1: Property receives reservation confirmation from guest. Icon: A computer monitor displaying a calendar with the number 24. Step 2: Notify guest of registration options. Icon: A computer monitor displaying a calendar grid next to silhouettes of a man and a woman. Step 3: Assign guest room. Icon: A computer monitor displaying 'AVAILABLE ROOMS' with options 101, 102, and 103, next to a smartphone displaying room 101. Step 4: Send guest digital key. Icon: A computer monitor displaying a key icon next to a smartphone displaying a key icon. Step 5: Key is automatically cancelled upon guest checkout. Icon: A computer monitor displaying a clock icon next to a smartphone displaying a key icon with a red 'X' over it. https://www.assaabloyglobalsolutions.com/downloads/product-sheets/mobile-access/Mobile-Access-App-Product-Sheet-EN.pdf

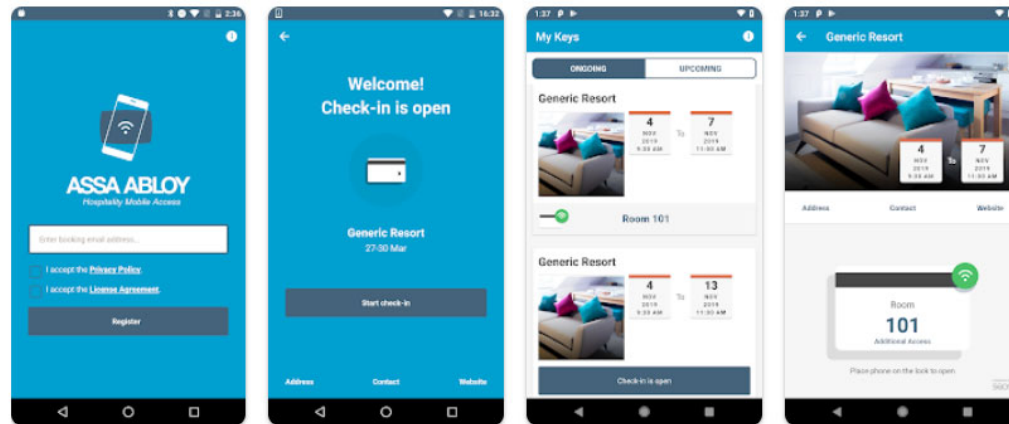
Claim 2	
2. The access control system of claim 1, wherein the communication setting is specific to the access device.	ASSA's access control system comprises the foregoing elements, wherein the communication setting is specific to the access device. On information and belief, the Bluetooth communication setting is specific to the access device for a given hotel room door lock to ensure that only the hotel guest with a reservation for a given room is able to communication with the access device.  ASSA ABLOY Mobile Access Solutions Brochure, p. 1 (the "Mobile Access Brochure").

Claim 2



Mobile Access Brochure, p. 9.

Claim 2



About this app →

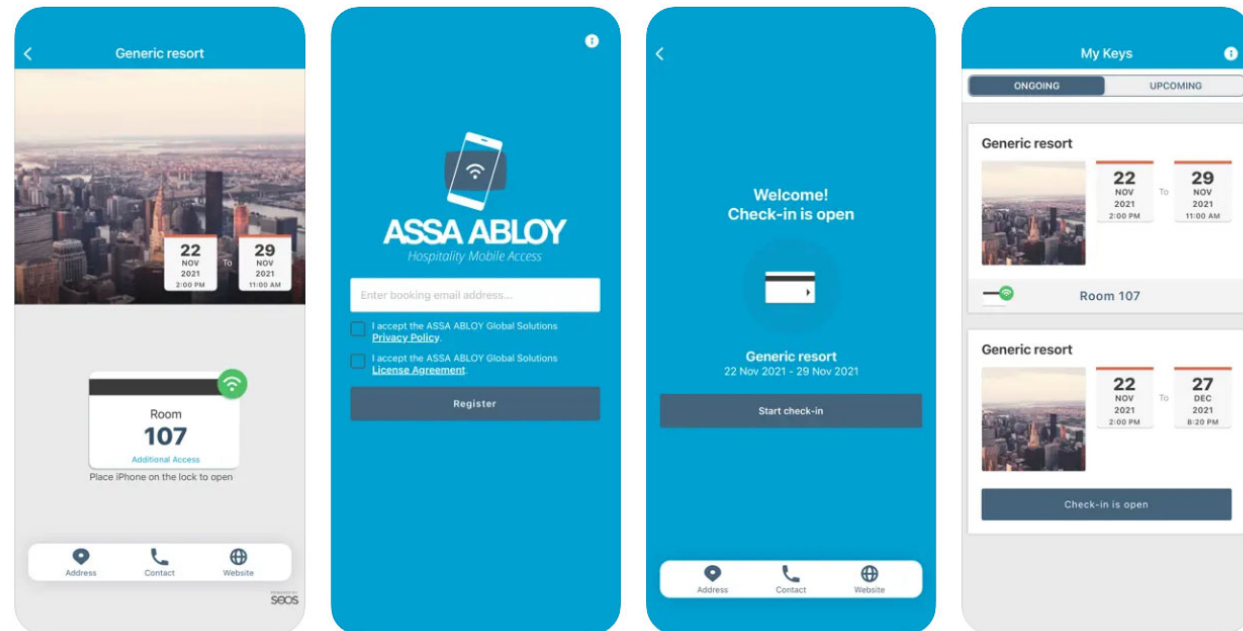
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https://play.google.com/store/apps/details?id=com.assaabloy.hospitality.mobileaccess.hospitalitymobileaccess&hl=en_US&gl=US

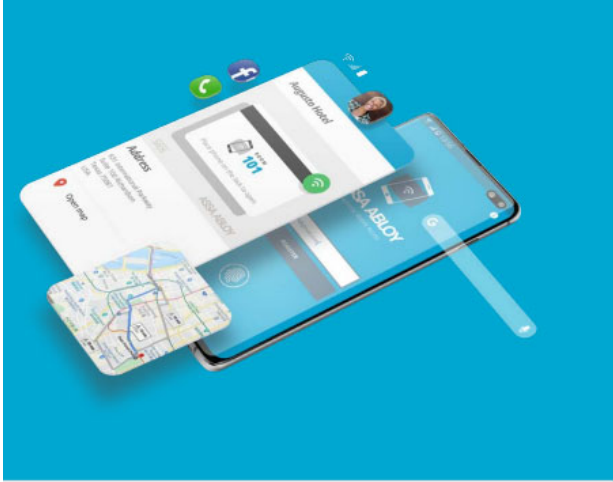
Claim 2

Screenshots iPad iPhone



<https://apps.apple.com/us/app/hospitality-mobile-access/id1017290566?platform=iphone>

Claim 2	
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Claim 2	
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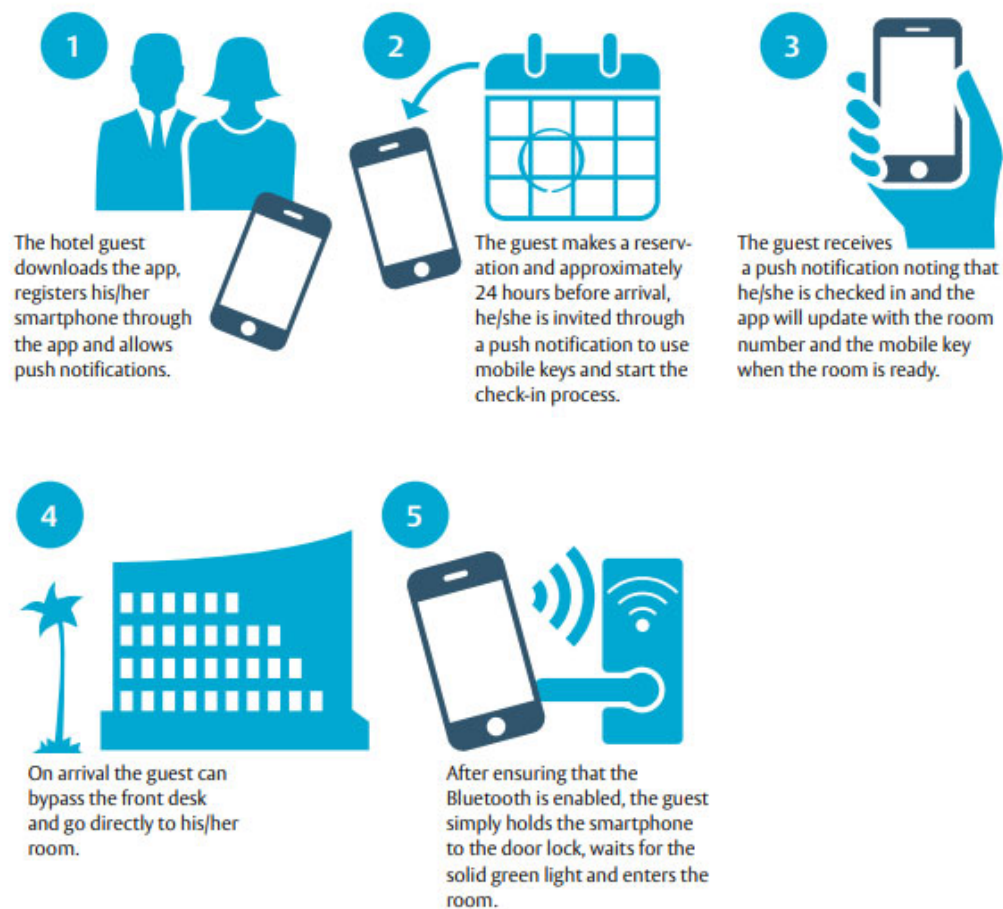
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<https://www.assaabloyglobalsolutions.com/en/hospitality-solutions>

Claim 2

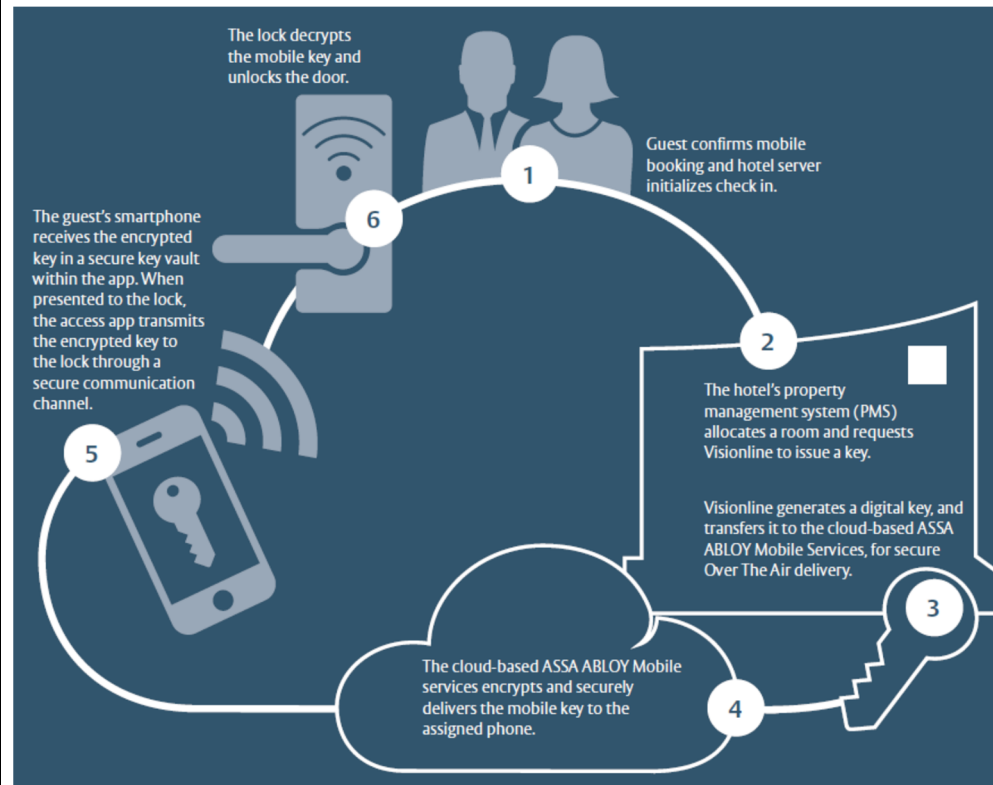


<https://www.assaabloyglobalsolutions.com/en/hospitality-solutions>

Claim 3

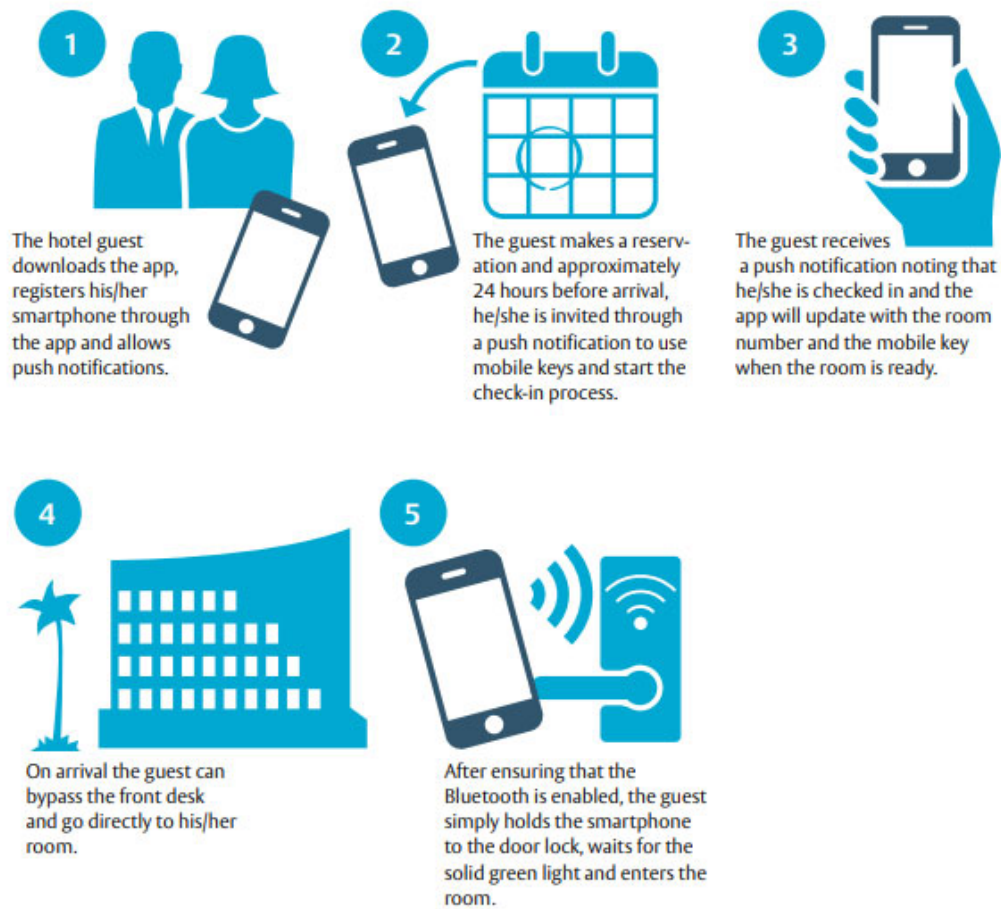
3. The access control system of claim 2, wherein the application notifies the user of proximity to the access device.

ASSA's system includes, uses (and ASSA instructs end users to use), and/or practices each element of Claim 2 and wherein the application notifies the user of proximity to the access device.



Mobile Access Brochure, p. 9.

Claim 3



<https://www.assaabloyglobalsolutions.com/en/hospitality-solutions>

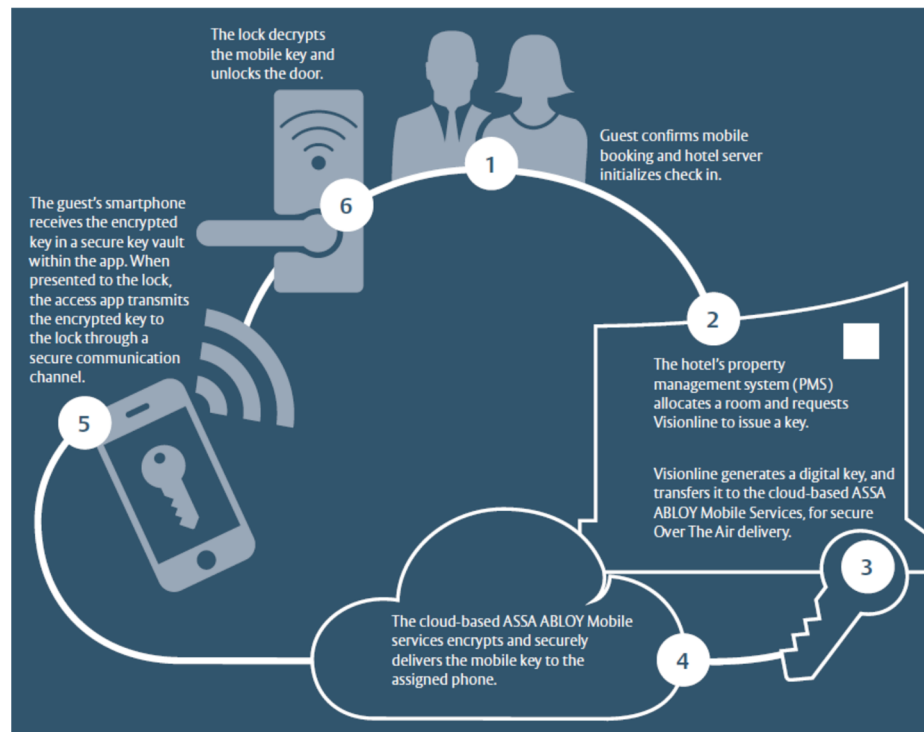
Claim 3	
	 <u>After ensuring that the Bluetooth is enabled</u>, the guest simply holds the smartphone to the door lock, waits for the solid green light and enters the room. Mobile Access Brochure, p. 6.

Claim 4	
4. The access control system of claim 1, wherein the communication module does not advertise that the communication module is present.	ASSA's system includes, uses (and ASSA instructs end users to use), and/or practices each element of Claim 1 and wherein the communication module does not advertise that the communication module is present. The ASSA system's communication module (<i>e.g.</i>, a Bluetooth module, <i>etc.</i>) does not advertise that it is present.

Claim 5

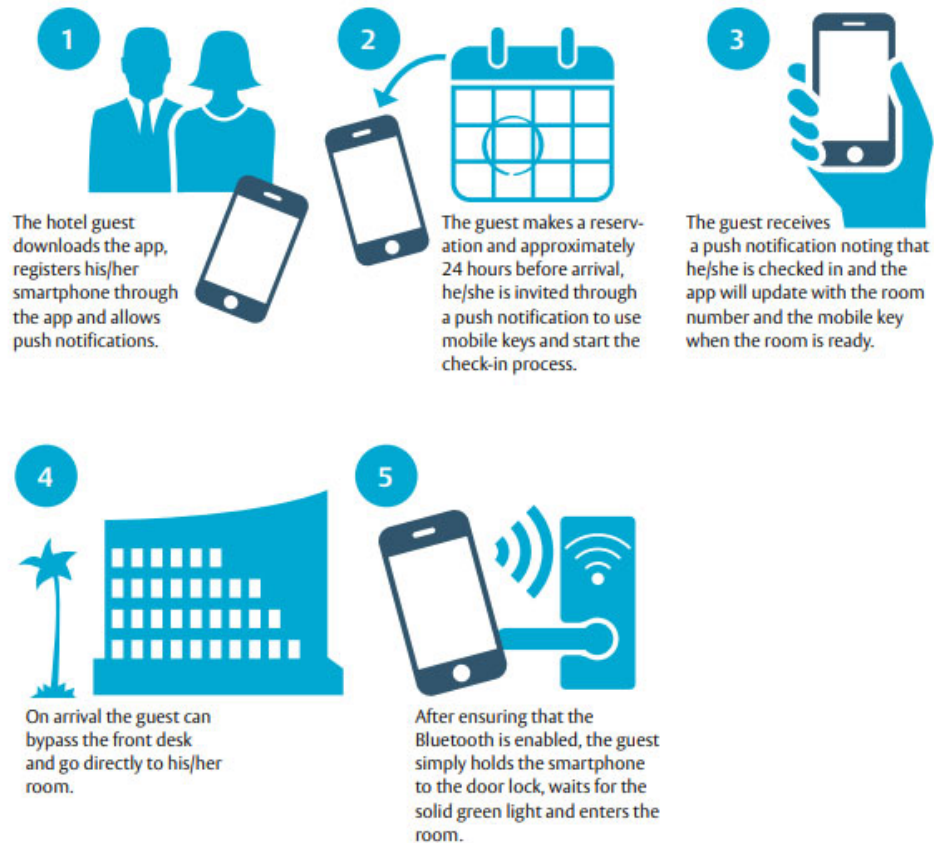
5. The access control system of claim 1, wherein the application uses Bluetooth to communicate with the access device and the communication setting comprises a Bluetooth ID.

ASSA's system includes and/or uses (and ASSA instructs end users to use) an application, wherein the application uses Bluetooth to communicate with the access device and the communication setting comprises a Bluetooth ID. ASSA's Mobile App uses Bluetooth, including a Bluetooth ID, to communicate with the access device.



Mobile Access Brochure, p. 9.

Claim 5



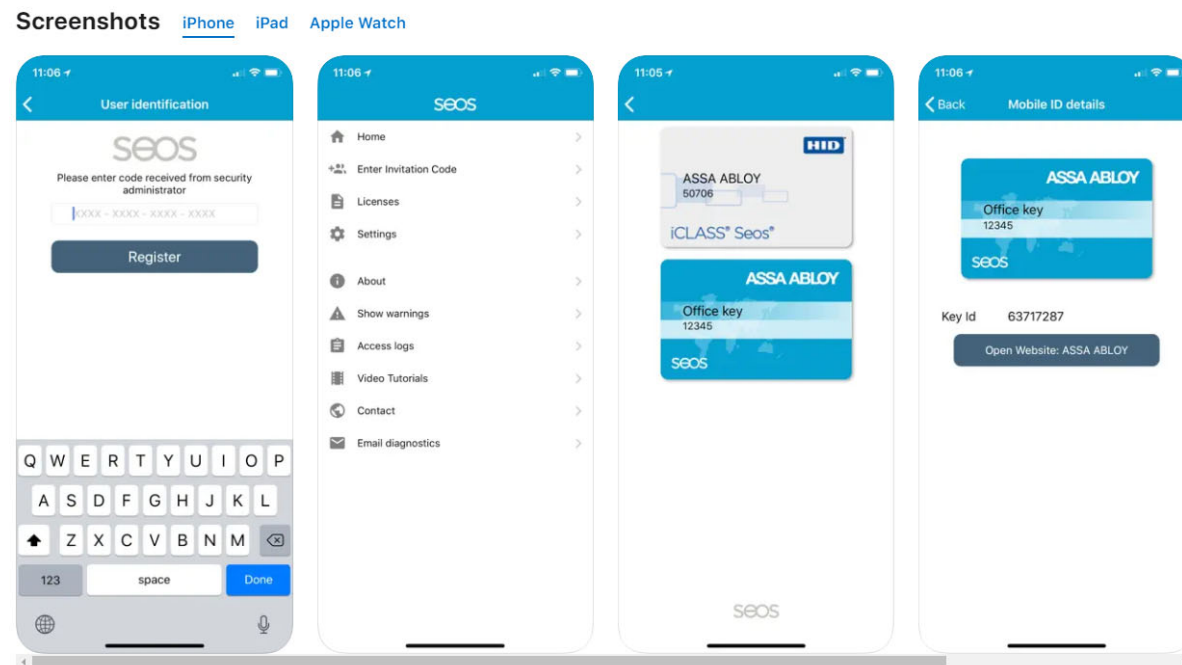
<https://www.assaabloyglobalsolutions.com/en/hospitality-solutions>

Claim 5	
	Step 3: Activate Mobile Access Without replacing existing hardware and with the addition of a Bluetooth Low Energy (BLE) reader, your property and guests can seamlessly begin to enjoy the contactless benefits of the technology. https://www.assaabloyglobalsolutions.com/en/hospitality-solutions/mobile-access-for-hospitality/rfid-upgrade

Claim 6

6. The access control system of claim 1, wherein the application uses Wi-Fi to communicate with the access device and the communication setting comprises a network SSID.

ASSA's system includes, uses (and ASSA instructs end users to use), and/or practices each element of Claim 1 and wherein the application uses Wi-Fi to communicate with the access device and the communication setting comprises a network SSID.

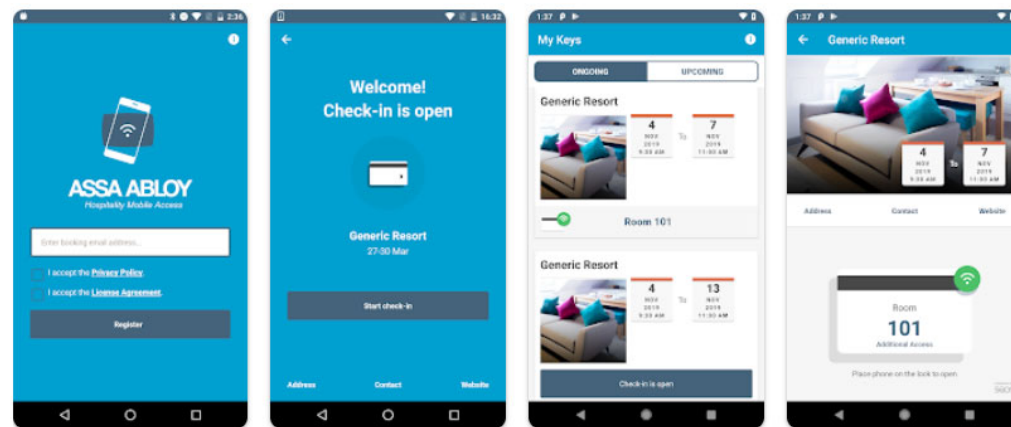


<https://apps.apple.com/us/app/assa-abloy-mobile-access/id793869814>

Claim 7

7. The access control system of claim 1, wherein the reservation certificate comprises the communication setting.

ASSA's system includes, uses (and ASSA instructs end users to use), and/or practices each element of Claim 1 and wherein the reservation certificate comprises the communication setting.



About this app →

With ASSA ABLOY Hospitality Mobile Access you can check in to your hotel room before you arrive and receive your room key direct to your phone. When you arrive at the hotel, go straight to your room and open the door by holding your phone up against the lock. Your hotel key is securely delivered and stored inside your device and you don't need to worry about a keycard.

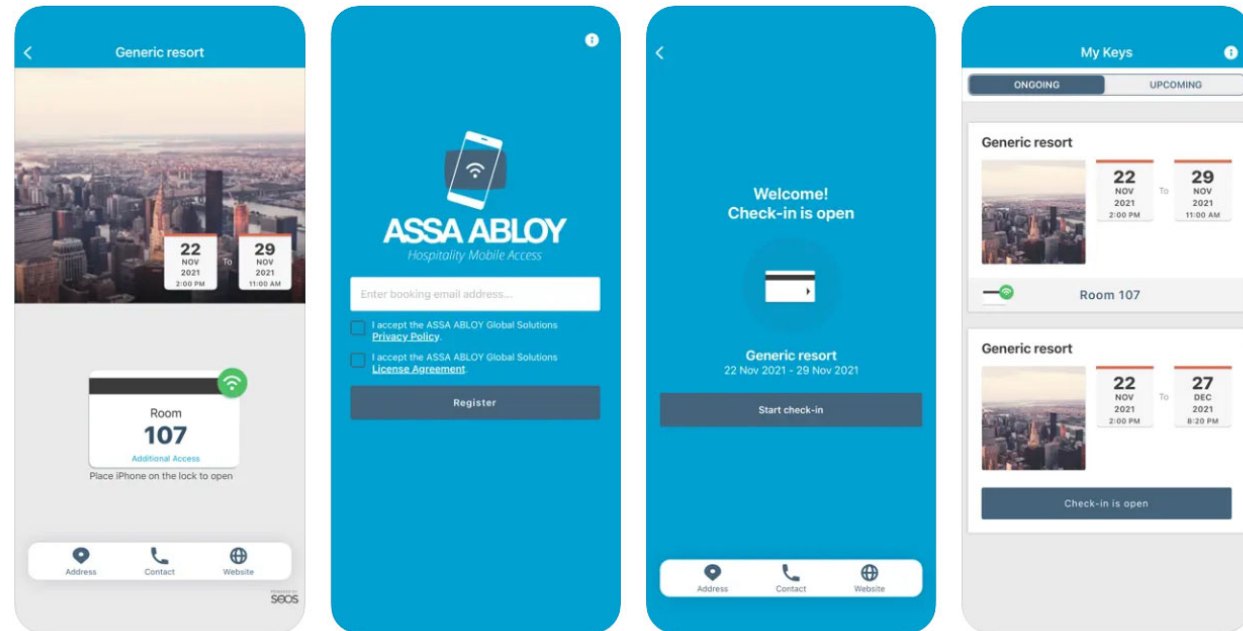
ASSA ABLOY Hospitality Mobile Access is available at select hotels around the world.

...

https://play.google.com/store/apps/details?id=com.assaabloy.hospitality.mobileaccess.hospitalitymobileaccess&hl=en_US&gl=US

Claim 7

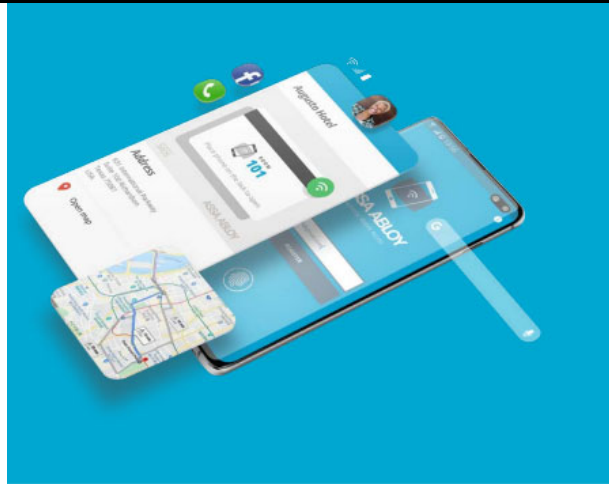
Screenshots [iPad](#) [iPhone](#)



<https://apps.apple.com/us/app/hospitality-mobile-access/id1017290566?platform=iphone>

Claim 7	
	Open your hotel room with your iPhone! With ASSA ABLOY Global Solutions Mobile Access you can check in to your hotel room before you arrive and receive your room key direct to your phone. When you arrive at the hotel, go straight to your room and open the door by holding your phone up against the lock. Your hotel key is securely delivered and stored inside your device and you don't need to worry about a keycard. ASSA ABLOY Global Solutions Mobile Access is available at selected hotels around the world. About our Mobile Access solution: The Mobile Access solution from ASSA ABLOY Global Solutions makes VingCard RFID locks operable with mobile devices through BLE (Bluetooth Low Energy) technology. The solution platform includes highly reliable and secure mobile key management and Trusted Service Manager (TSM) services. ASSA ABLOY Global Solutions Mobile Access is powered by award winning Seos® technology from ASSA ABLOY, learn more on our web site. https://apps.apple.com/us/app/hospitality-mobile-access/id1017290566?platform=iphone

Claim 7



Unique User Experience

Mobile Access offers guests a whole new hotel experience. Depending on the solution deployed they can reserve and book their room using their mobile phone or device. They can then use the phone to check in and check out.

<https://www.assaabloyglobalsolutions.com/en/hospitality-solutions>

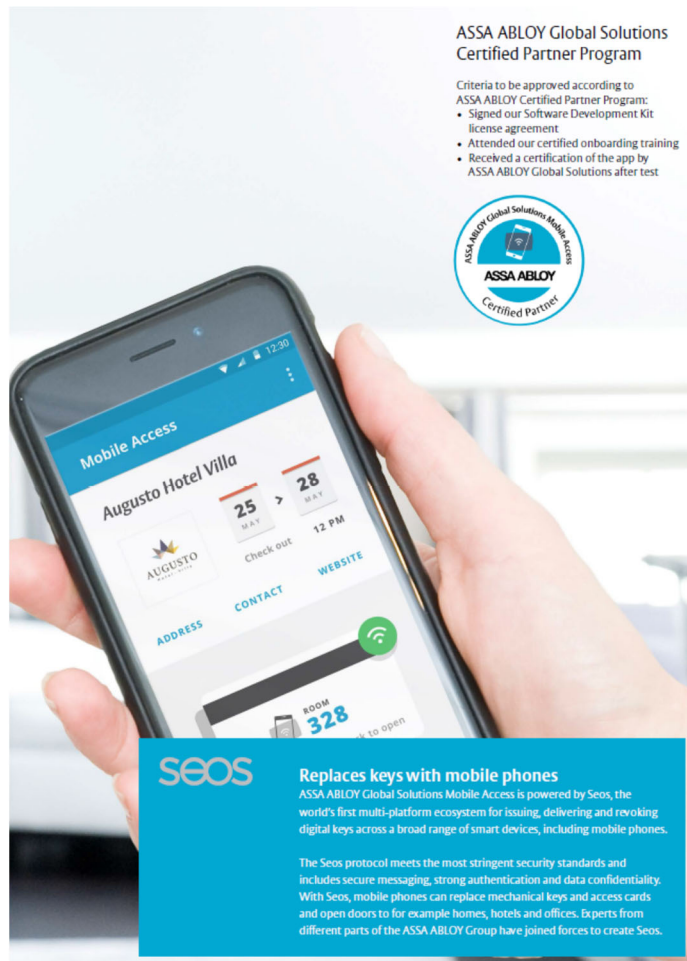
Claim 7

How It Works?

- 1 Download the application.
- 2 Make the reservation.
- 3 Check into the room.
- 4 Bypass frontdesk upon arrival and go to the room.
- 5 Open door with the use of mobile application / mobile key.

<https://www.assaabloyglobalsolutions.com/en/hospitality-solutions>

Claim 7



**ASSA ABLOY Global Solutions
Certified Partner Program**

Criteria to be approved according to
ASSA ABLOY Certified Partner Program:

- Signed our Software Development Kit license agreement
- Attended our certified onboarding training
- Received a certification of the app by ASSA ABLOY Global Solutions after test



seos Replaces keys with mobile phones

ASSA ABLOY Global Solutions Mobile Access is powered by Seos, the world's first multi-platform ecosystem for issuing, delivering and revoking digital keys across a broad range of smart devices, including mobile phones.

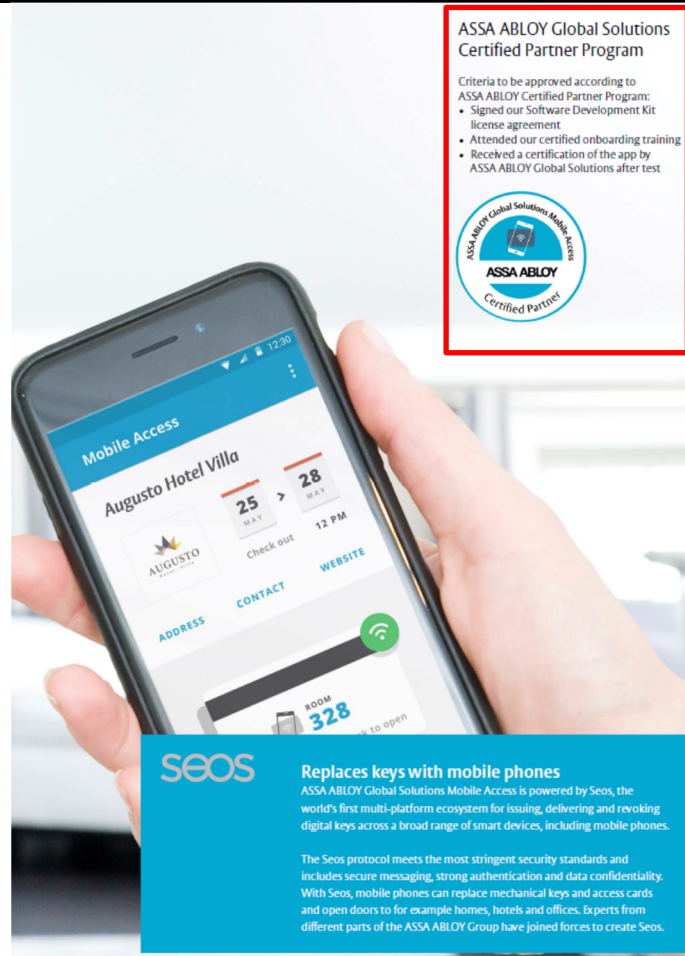
The Seos protocol meets the most stringent security standards and includes secure messaging, strong authentication and data confidentiality. With Seos, mobile phones can replace mechanical keys and access cards and open doors to for example homes, hotels and offices. Experts from different parts of the ASSA ABLOY Group have joined forces to create Seos.

Mobile Access Brochure, p. 5.

Claim 8	
8. An access control system comprising: an access device comprising a communication module connected to a processor having control of a door lock;	ASSA ABLOY AB, ASSAY ABLOY Mobile Services AB, and ASSA ABLOY Global Solutions AB (“ASSA”) make, use (including via testing), sell, import, and/or offer for sale, and instruct their subsidiaries, affiliates, and end users to use the ASSA ABLOY Global Solutions Mobile Access technology and associated App (“Mobile App”) feature as a key to a hotel room by using, among other technologies, integrated SEOS technology (which “Replaces Keys with Mobile Phones”), VingCard Classic Electronic Locks and VingCard Essence Electronic Locks and associated Bluetooth readers including, but not limited to, Bluetooth Low Energy readers, and processors included therein, and the associated hardware, software, applications, and functionality associated with this product and solution (hereinafter, the “Accused Products”), constituting an access control system, including an access control system.  ASSA ABLOY Mobile Access Solutions Brochure, p. 1 (the “Mobile Access Brochure”).

Claim 8	
	ASSA also instructs and encourages others to use its Mobile Access Software Development kit (SDK) as integrated into their hotel customers mobile applications, which provides substantively identical features and functionality as the Mobile App.  ASSA ABLOY Global Solutions Mobile Access App This is our own ready-to-use, off-the-shelf solution. The app suits hotels that want to provide basic mobile access solutions to their guests in a simple to use format. There are no integrations or third-party dependencies required. We publish a general app that is available in the App Store and on Google Play. Through an administration portal, hotels can customize their digital key graphics to reflect company branding or design. This will then show in a "Passbook" inspired style for the hotel to use.  Customer Integration This solution is created for hotels with their own app initiatives that want to integrate mobile access into their own apps and back end systems. <u>ASSA ABLOY Global Solutions provides a Mobile Access Software Development kit (SDK) together with dedicated onboarding services to facilitate seamless integration.</u>  Third Party Certified Partner App This solution suits hotels that want mobile app functionality beyond just access control, but don't yet have their own in-house app initiatives. <u>They can here pick a solution from one of our selected app specialist partners, who through our Certified Partner Program already have integrated our mobile access functionality into their products.</u> Mobile Access Brochure, p. 4.

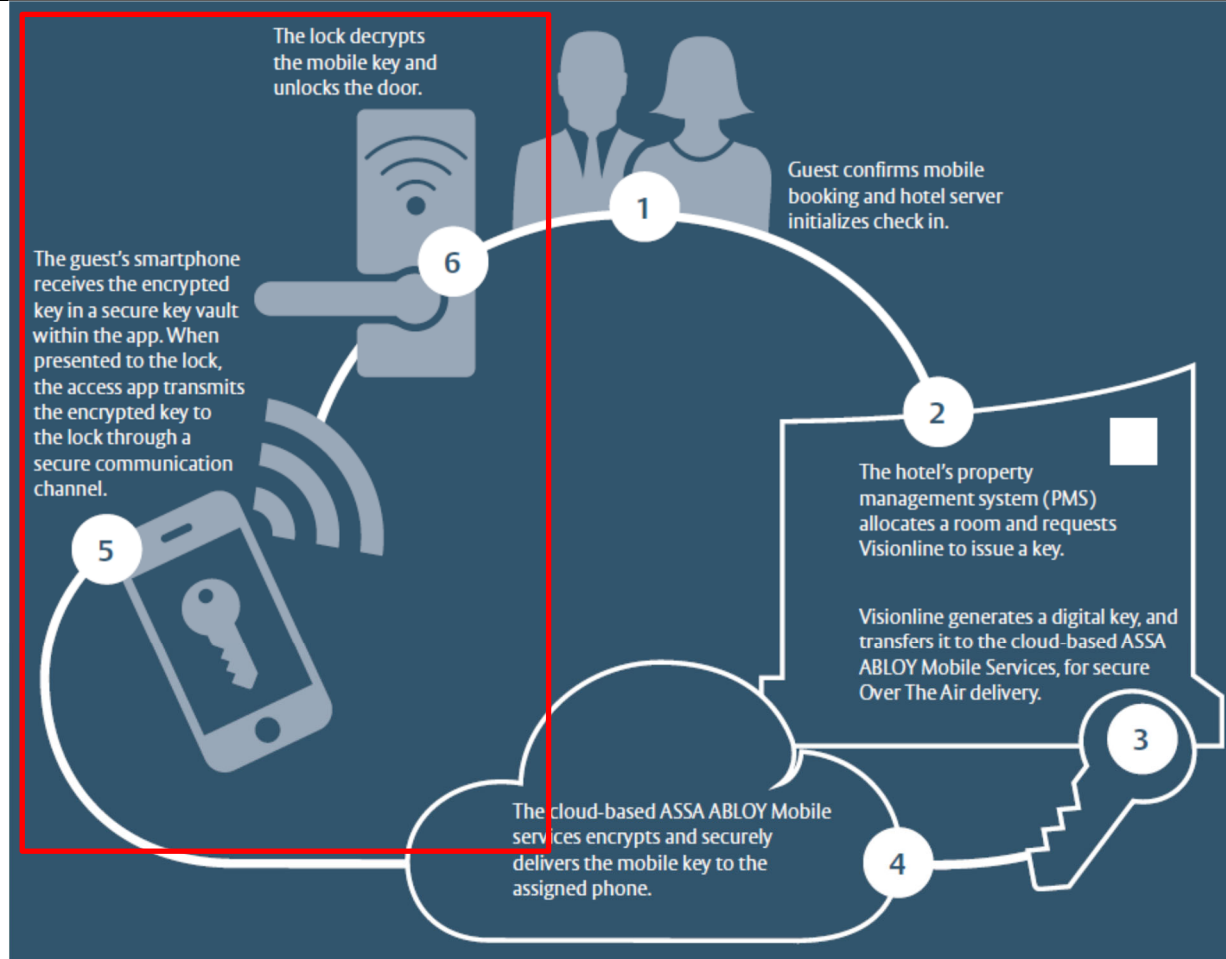
Claim 8



Mobile Access Brochure, p. 5.

Claim 8	
	 After ensuring that the Bluetooth is enabled, <u>the guest simply holds the smartphone to the door lock, waits for the solid green light and enters the room.</u> Mobile Access Brochure, p. 6.

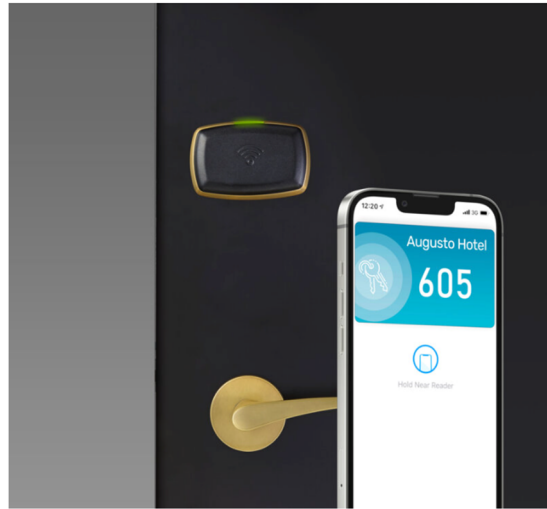
Claim 8



Mobile Access Brochure, p. 9.

Claim 8	
	Lock system The latest generation of VingCard's RFID locks Classic, Signature, Essence and Allure are all compatible with Mobile Access. The only thing needed is to add a small Bluetooth Low Energy board to the lock.  Classic RFID Signature RFID Essence Allure Even with older versions of lock systems it's possible to install Mobile Access. You can keep most of the lock hardware and just upgrade the reader electronics to the latest RFID version and add the Bluetooth Low Energy board. Software The latest version of Visionline is needed together with a Mobile Access license option. It connects securely to the cloud-based ASSA ABLOY Global Solutions Mobile Access services. Mobile Access Brochure, p. 8; <i>see also</i> Website (https://www.assaabloyglobalsolutions.com/en/hospitality-solutions/electronic-locks-for-hotels)

Claim 8



Step 3: Activate Mobile Access

Without replacing existing hardware and with the addition of a Bluetooth Low Energy (BLE) reader, your property and guests can seamlessly begin to enjoy the contactless benefits of the technology.

<https://www.assaabloyglobalsolutions.com/en/hospitality-solutions/mobile-access-for-hospitality/rfid-upgrade>

Claim 8

Mobile Access Made Easy 2020

ASSA ABLOY Global Solutions Mobile Access

John Doe Operator

Press **Esc** to exit full screen

Reservations > New reservation

New reservation

Room number

3609

Reference

booking

Check in

2020-07-06

Check out

2020-07-10

Add guests

New guest

Name

Jane Doe

Email

janedoe@mail.com

Common rooms

+ Add guest

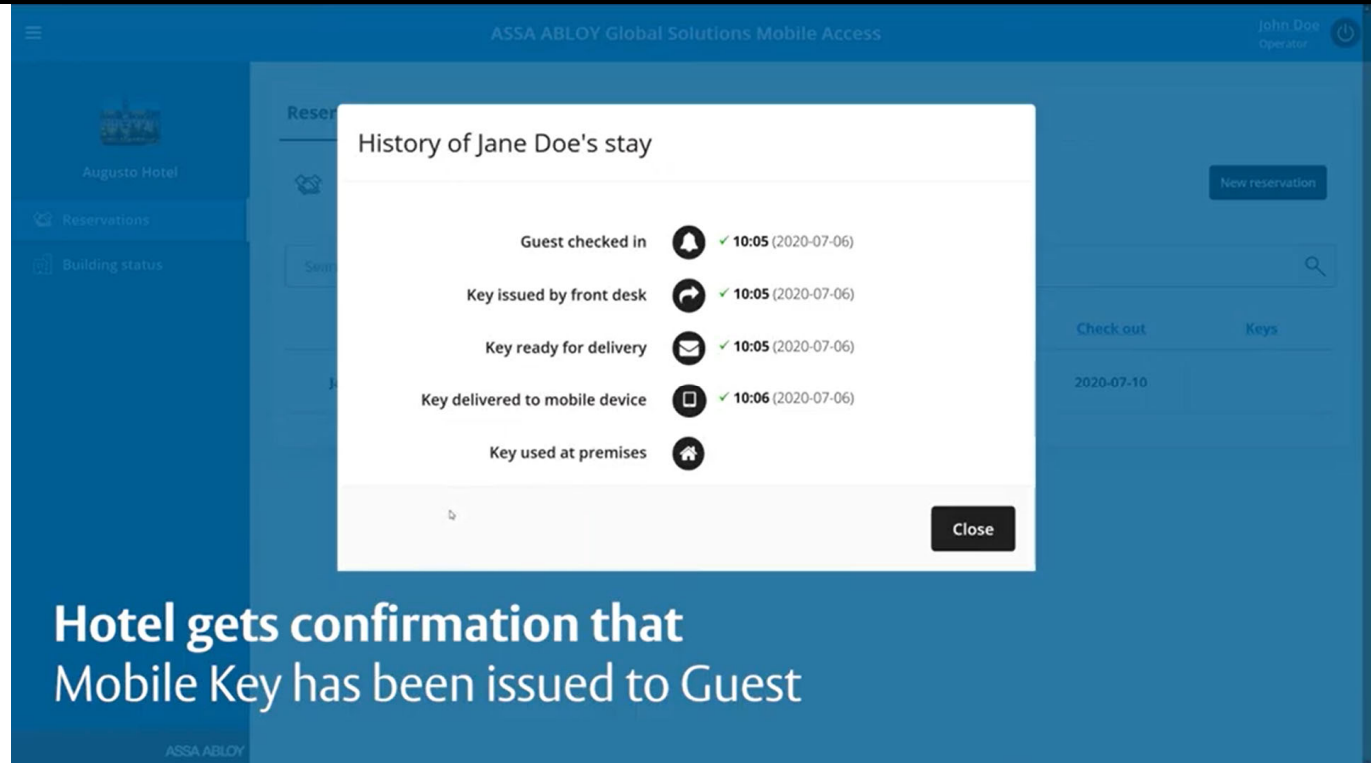
0:28 / 1:15

Scroll for details

Cancel

<https://youtu.be/YYvYMml-rj8>

Claim 8



**Hotel gets confirmation that
Mobile Key has been issued to Guest**

<https://youtu.be/YYvYMml-rj8>

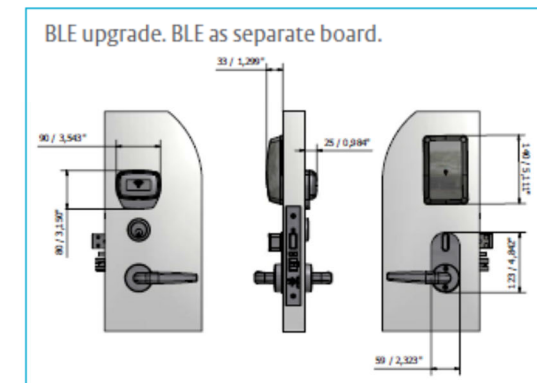
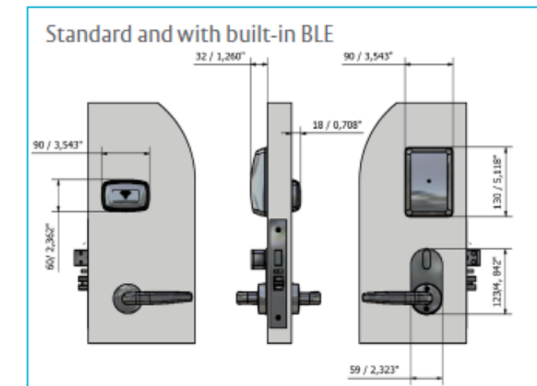
Claim 8

FEATURES

- : EPD (Environmental Product Declaration) certified
- : Supports the latest RFID technology
- : Supports Mobile Access
- : Online compatible
- : Easy upgrade from Signature Magstripe or Combo
- : Fire listed for use on fire doors (UL, BS, EN)
- : Case hardened full 1-inch (ANSI) throw deadbolt
- : Panic release function – the deadbolt and latch are automatically retracted by inside handle for easy regress in emergency situations
- : ADA compliant (users with physical disabilities)
- : Stainless steel parts for mechanical strength, corrosion resistance and attractive appearance
- : Optional high security mechanical override cylinder
- : Detailed audit trail: 3000 events in offline mode (Vostio and Visionline version 1.24 and above) and unlimited number of events in online mode
- : RFID Specifications:
 - 13,56MHz technology
 - Compatible with the following standards:
 - ISO 14443 A (MIFARE including Desfire)
 - ISO 14443 B
 - ISO 15693

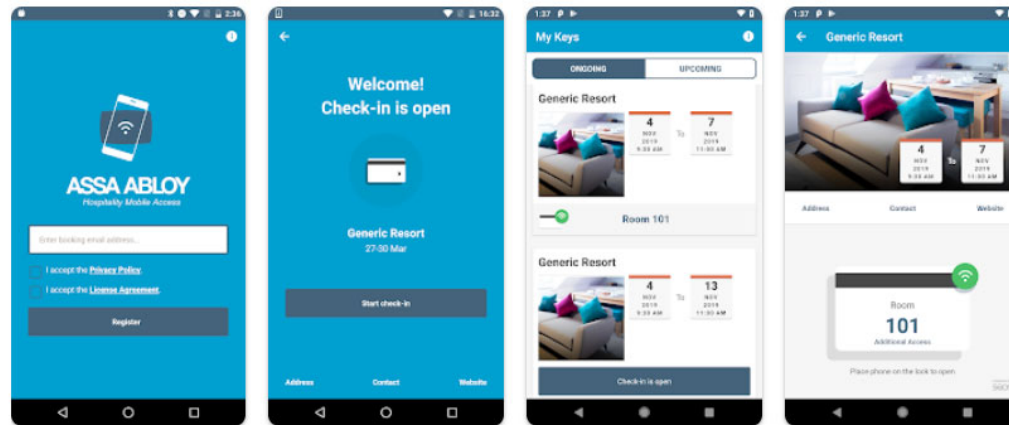
E.g., VingCard Signature RFID Product Sheet English, p. 1.

DIMENSIONS



Claim 8	
an application on a portable terminal; and	ASSA's system includes and/or uses (and ASSA instructs end users to use) an application on a portable terminal. ASSA's access control system comprises an app, including the ASSA Mobile App, that operates on a portable terminal, such as a smartphone.  ASSA ABLOY Mobile Access Solutions Brochure, p. 1 (the "Mobile Access Brochure").

Claim 8



About this app →

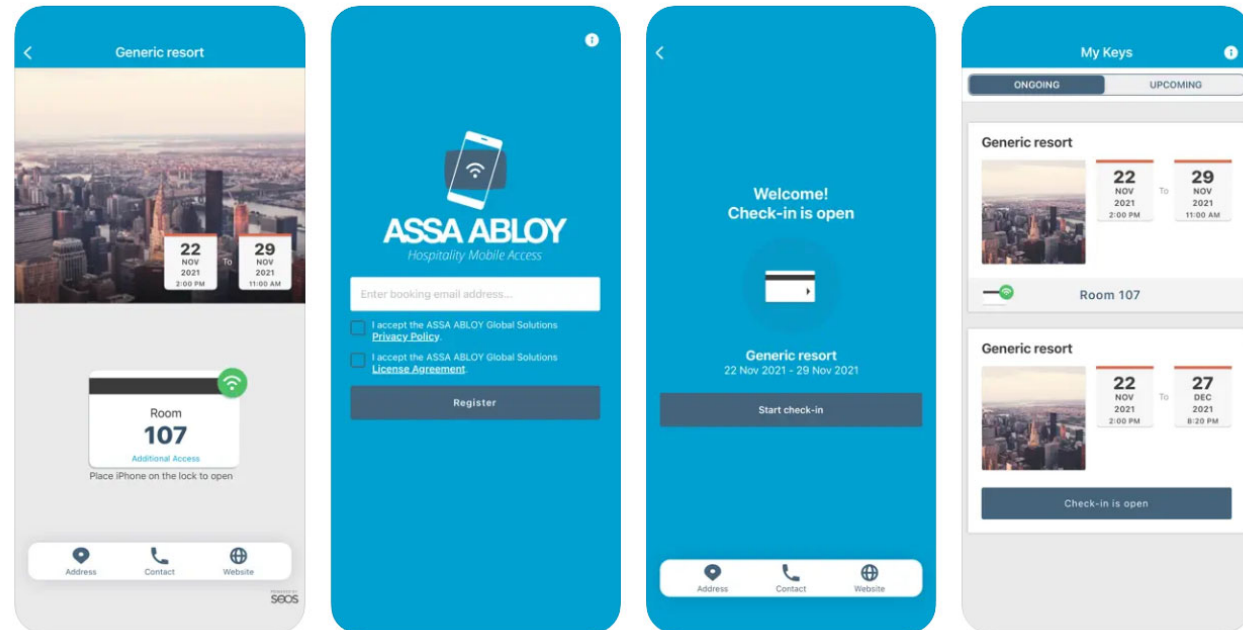
With ASSA ABLOY Hospitality Mobile Access you can check in to your hotel room before you arrive and receive your room key direct to your phone. When you arrive at the hotel, go straight to your room and open the door by holding your phone up against the lock. Your hotel key is securely delivered and stored inside your device and you don't need to worry about a keycard.

ASSA ABLOY Hospitality Mobile Access is available at select hotels around the world.

...
https://play.google.com/store/apps/details?id=com.assaabloy.hospitality.mobileaccess.hospitalitymobileaccess&hl=en_US&gl=US

Claim 8

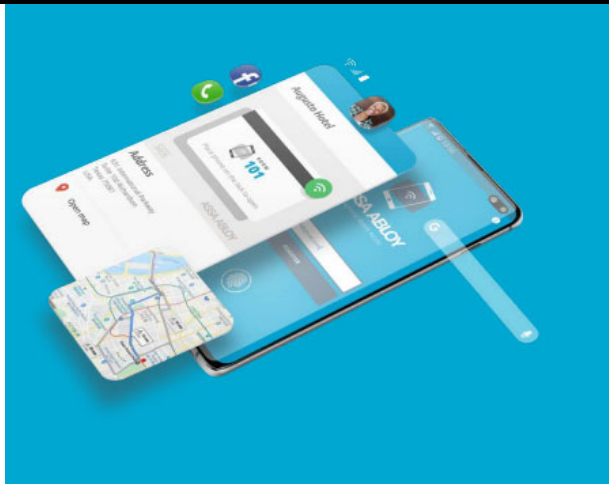
Screenshots iPad iPhone



<https://apps.apple.com/us/app/hospitality-mobile-access/id1017290566?platform=iphone>

Claim 8	
	Open your hotel room with your iPhone! With ASSA ABLOY Global Solutions Mobile Access you can check in to your hotel room before you arrive and receive your room key direct to your phone. When you arrive at the hotel, go straight to your room and open the door by holding your phone up against the lock. Your hotel key is securely delivered and stored inside your device and you don't need to worry about a keycard. ASSA ABLOY Global Solutions Mobile Access is available at selected hotels around the world. About our Mobile Access solution: The Mobile Access solution from ASSA ABLOY Global Solutions makes VingCard RFID locks operable with mobile devices through BLE (Bluetooth Low Energy) technology. The solution platform includes highly reliable and secure mobile key management and Trusted Service Manager (TSM) services. ASSA ABLOY Global Solutions Mobile Access is powered by award winning Seos® technology from ASSA ABLOY, learn more on our web site. https://apps.apple.com/us/app/hospitality-mobile-access/id1017290566?platform=iphone

Claim 8



Unique User Experience

Mobile Access offers guests a whole new hotel experience. Depending on the solution deployed they can reserve and book their room using their mobile phone or device. They can then use the phone to check in and check out.

<https://www.assaabloyglobalsolutions.com/en/hospitality-solutions>

Claim 8

How It Works?

- 1 Download the application.
- 2 Make the reservation.
- 3 Check into the room.
- 4 Bypass frontdesk upon arrival and go to the room.
- 5 Open door with the use of mobile application / mobile key.

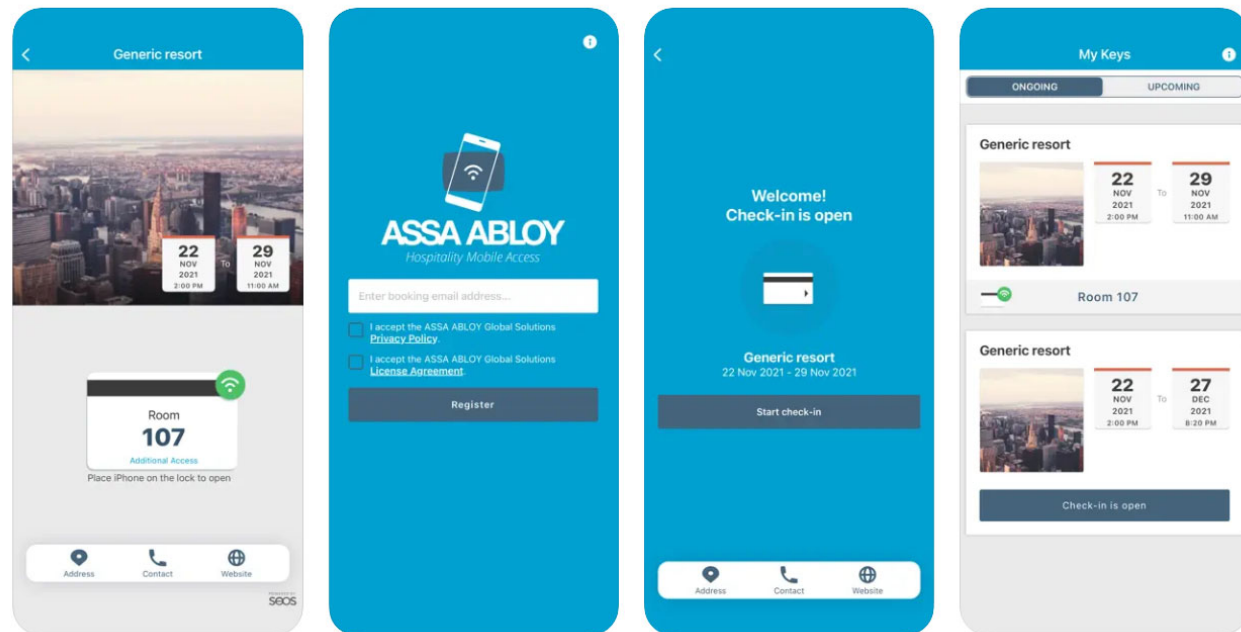
<https://www.assaabloyglobalsolutions.com/en/hospitality-solutions>

Claim 8	
a server to provide a communication setting and a reservation certificate to the application, the communication setting corresponding to the access device, and the reservation certificate comprising an interval of a reservation,	ASSA's system includes and/or uses (and ASSA instructs end users to use) a server to provide a communication setting and a reservation certificate to the application, the communication setting corresponding to the access device, and the reservation certificate comprising an interval of a reservation. https://www.assaabloy.com/tr/en/stories/blog/assa-abloy-mobile-access-technology; see also https://www.assaabloyglobalsolutions.com/en/hospitality-solutions/mobile-access-for-hospitality/rfid-upgrade. About this app → With ASSA ABLOY Hospitality Mobile Access you can check in to your hotel room before you arrive and receive your room key direct to your phone. When you arrive at the hotel, go straight to your room and open the door by holding your phone up against the lock. Your hotel key is securely delivered and stored inside your device and you don't need to worry about a keycard. ASSA ABLOY Hospitality Mobile Access is available at select hotels around the world.

Claim 8

https://play.google.com/store/apps/details?id=com.assaabloyn.hospitality.mobileaccess.hospitalitymobileaccess&hl=en_US&gl=US

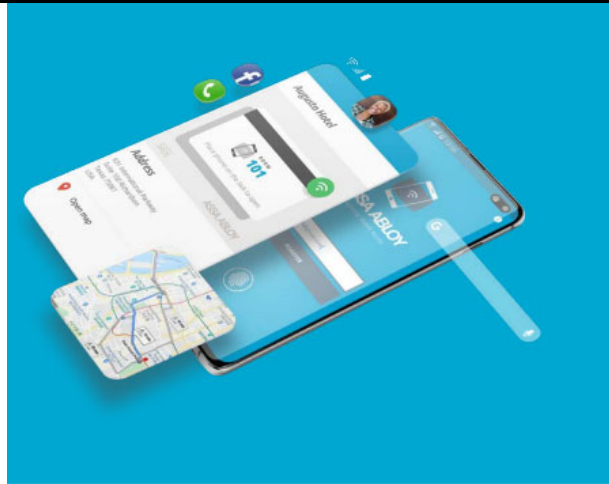
Screenshots iPad iPhone



<https://apps.apple.com/us/app/hospitality-mobile-access/id1017290566?platform=iphone>

Claim 8	
	Open your hotel room with your iPhone! With ASSA ABLOY Global Solutions Mobile Access you can check in to your hotel room before you arrive and receive your room key direct to your phone. When you arrive at the hotel, go straight to your room and open the door by holding your phone up against the lock. Your hotel key is securely delivered and stored inside your device and you don't need to worry about a keycard. ASSA ABLOY Global Solutions Mobile Access is available at selected hotels around the world. About our Mobile Access solution: The Mobile Access solution from ASSA ABLOY Global Solutions makes VingCard RFID locks operable with mobile devices through BLE (Bluetooth Low Energy) technology. The solution platform includes highly reliable and secure mobile key management and Trusted Service Manager (TSM) services. ASSA ABLOY Global Solutions Mobile Access is powered by award winning Seos® technology from ASSA ABLOY, learn more on our web site. https://apps.apple.com/us/app/hospitality-mobile-access/id1017290566?platform=iphone

Claim 8



Unique User Experience

Mobile Access offers guests a whole new hotel experience. Depending on the solution deployed they can reserve and book their room using their mobile phone or device. They can then use the phone to check in and check out.

<https://www.assaabloyglobalsolutions.com/en/hospitality-solutions>

Claim 8

How It Works?

- 1 Download the application.
- 2 Make the reservation.
- 3 Check into the room.
- 4 Bypass frontdesk upon arrival and go to the room.
- 5 Open door with the use of mobile application / mobile key.

<https://www.assaabloyglobalsolutions.com/en/hospitality-solutions>

Claim 8

Mobile Access Made Easy 2020

ASSA ABLOY Global Solutions Mobile Access

Press Esc to exit full screen

Augusto Hotel

Reservations

Building status

New reservation

Room number

3609

Reference

booking

Check in

2020-07-06

Check out

2020-07-10

Add guests

New guest

Name

jane Doe

Email

janedoe@mail.com

Common rooms

+ Add guest

Cancel

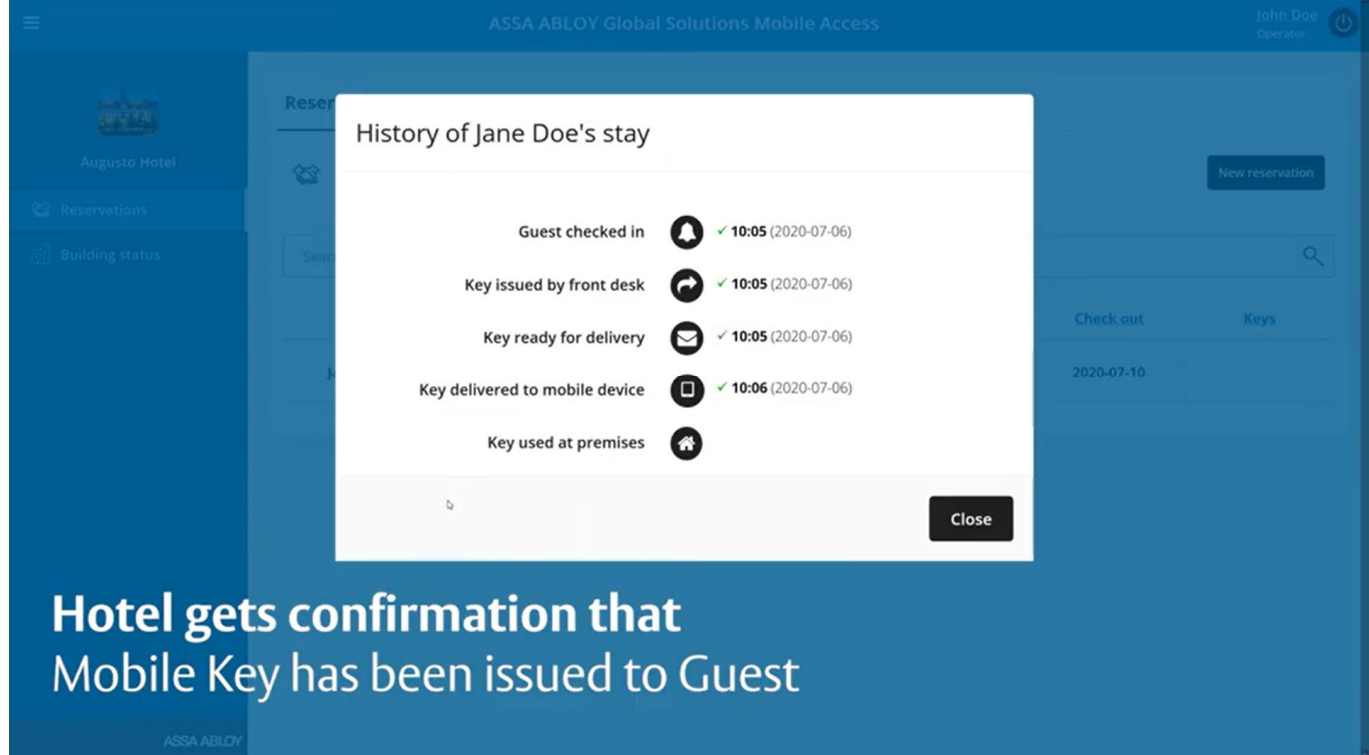
Scroll for details

0:28 / 1:15

ASSA ABLOY

<https://youtu.be/YYvYMml-rj8>

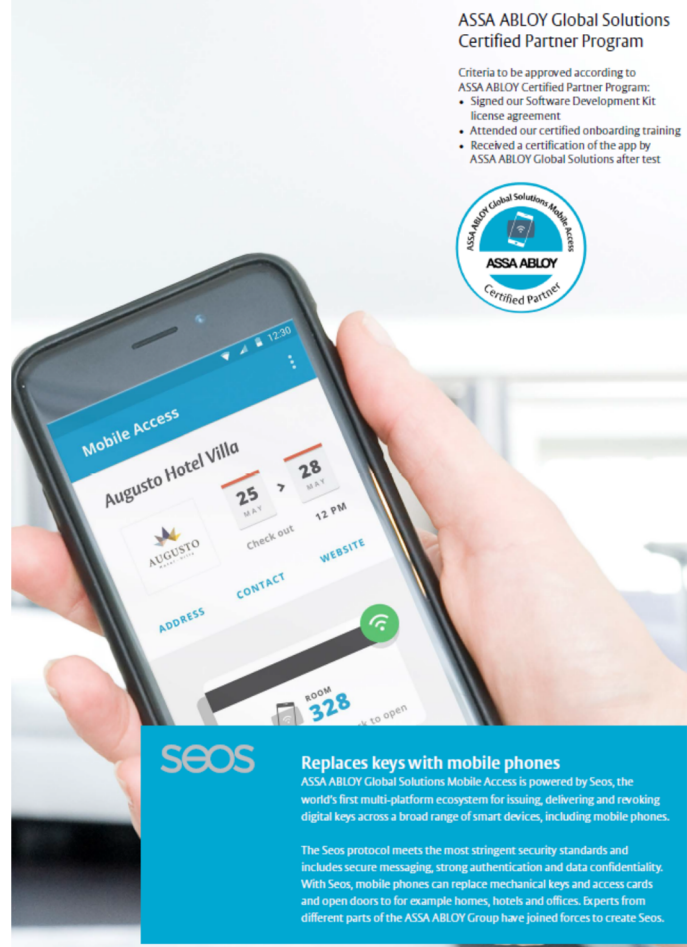
Claim 8



<https://youtu.be/YYvYMml-rj8>

Claim 8	
	 ASSA ABLOY Global Solutions Mobile Access App This is our own ready-to-use, off-the-shelf solution. The app suits hotels that want to provide basic mobile access solutions to their guests in a simple to use format. There are no integrations or third-party dependencies required. We publish a general app that is available in the App Store and on Google Play. Through an administration portal, hotels can customize their digital key graphics to reflect company branding or design. This will then show in a "Passbook" inspired style for the hotel to use.  Customer Integration This solution is created for hotels with their own app initiatives that want to integrate mobile access into their own apps and back end systems. <u>ASSA ABLOY Global Solutions provides a Mobile Access Software Development kit (SDK) together with dedicated onboarding services to facilitate seamless integration.</u>  Third Party Certified Partner App This solution suits hotels that want mobile app functionality beyond just access control, but don't yet have their own in-house app initiatives. <u>They can here pick a solution from one of our selected app specialist partners, who through our Certified Partner Program already have integrated our mobile access functionality into their products.</u> Mobile Access Brochure, p. 4.

Claim 8



**ASSA ABLOY Global Solutions
Certified Partner Program**

Criteria to be approved according to
ASSA ABLOY Certified Partner Program:

- Signed our Software Development Kit license agreement
- Attended our certified onboarding training
- Received a certification of the app by ASSA ABLOY Global Solutions after test

ASSA ABLOY Global Solutions Mobile Access
ASSA ABLOY
Certified Partner

seos

Replaces keys with mobile phones
ASSA ABLOY Global Solutions Mobile Access is powered by Seos, the world's first multi-platform ecosystem for issuing, delivering and revoking digital keys across a broad range of smart devices, including mobile phones.

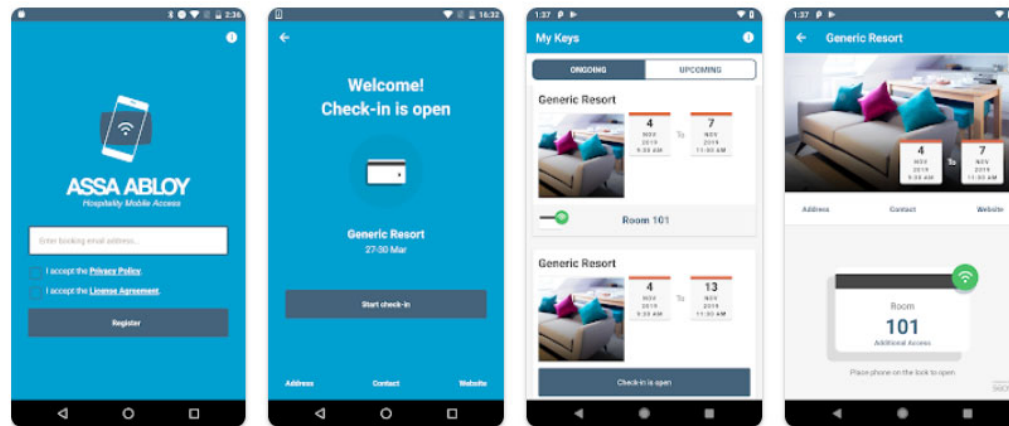
The Seos protocol meets the most stringent security standards and includes secure messaging, strong authentication and data confidentiality. With Seos, mobile phones can replace mechanical keys and access cards and open doors to for example homes, hotels and offices. Experts from different parts of the ASSA ABLOY Group have joined forces to create Seos.

Mobile Access Brochure, p. 5.

Claim 8

wherein the processor receives the reservation certificate from the application based on use by the application of the communications setting, and wherein the processor compares the interval of the reservation to a current time accessible to the processor to determine if the reservation certificate is current and wherein the processor activates the door lock when the processor determines that the reservation certificate is current.

ASSA's system includes and/or uses (and ASSA instructs end users to use) wherein the processor receives the reservation certificate from the application based on use by the application of the communications setting, and wherein the processor compares the interval of the reservation to a current time accessible to the processor to determine if the reservation certificate is current and wherein the processor activates the door lock when the processor determines that the reservation certificate is current.



About this app →

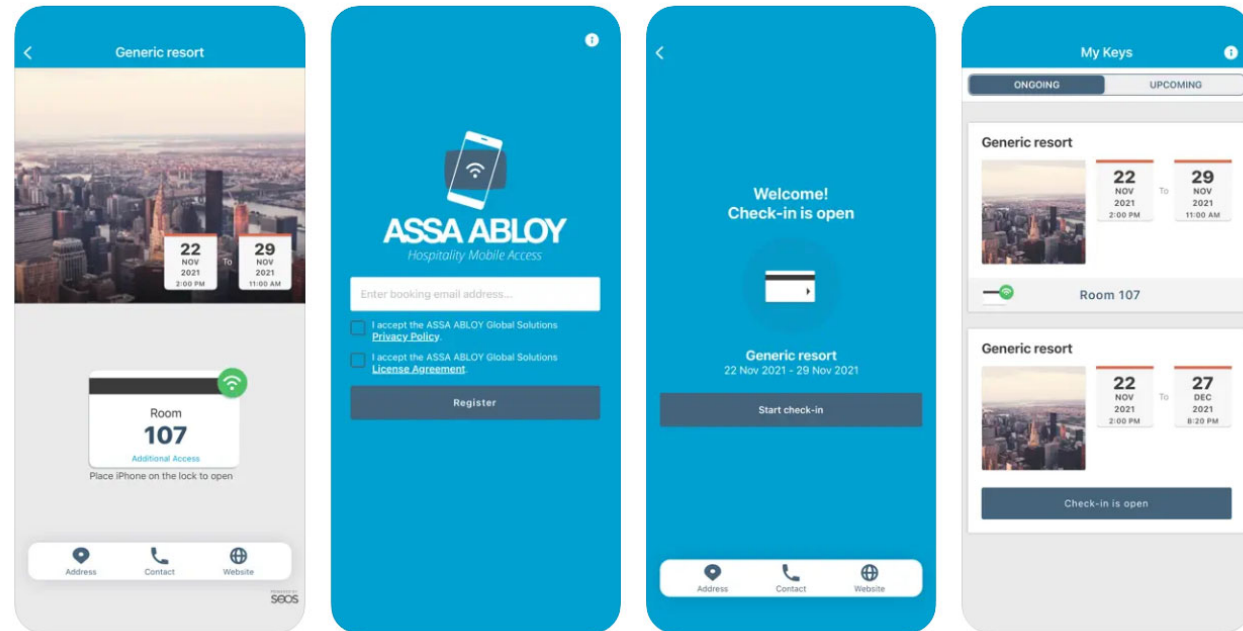
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...
https://play.google.com/store/apps/details?id=com.assaabloy.hospitality.mobileaccess.hospitalitymobileaccess&hl=en_US&gl=US

Claim 8

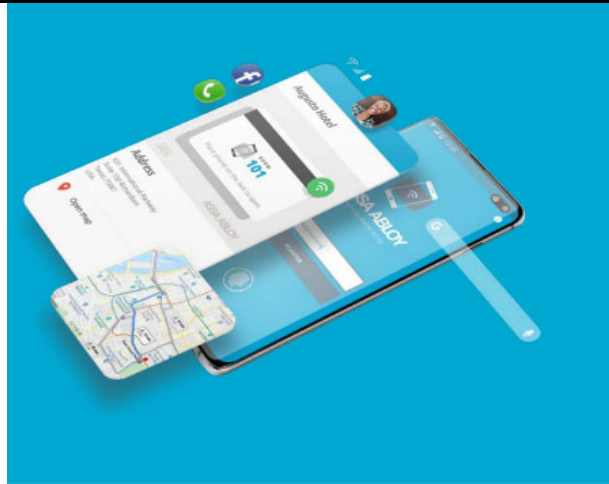
Screenshots iPad iPhone



<https://apps.apple.com/us/app/hospitality-mobile-access/id1017290566?platform=iphone>

Claim 8	
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Claim 8



Unique User Experience

Mobile Access offers guests a whole new hotel experience. Depending on the solution deployed they can reserve and book their room using their mobile phone or device. They can then use the phone to check in and check out.

<https://www.assaabloyglobalsolutions.com/en/hospitality-solutions>

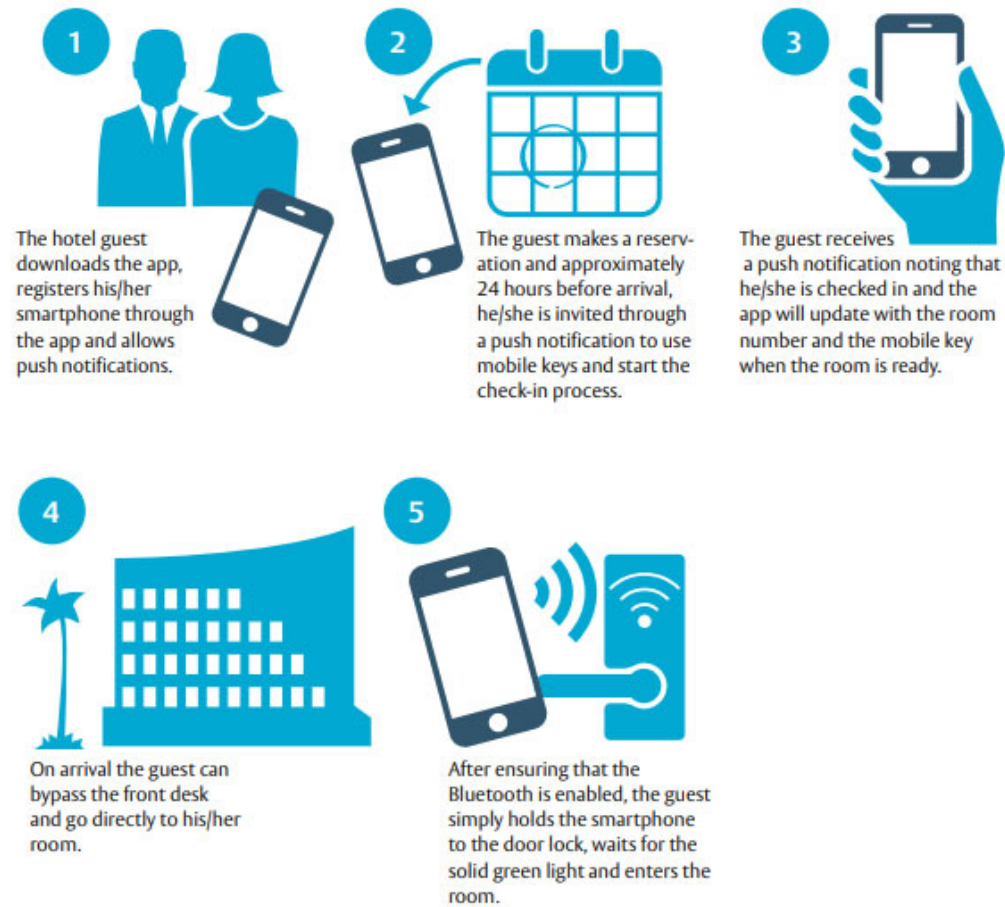
Claim 8

How It Works?

- 1 Download the application.
- 2 Make the reservation.
- 3 Check into the room.
- 4 Bypass frontdesk upon arrival and go to the room.
- 5 Open door with the use of mobile application / mobile key.

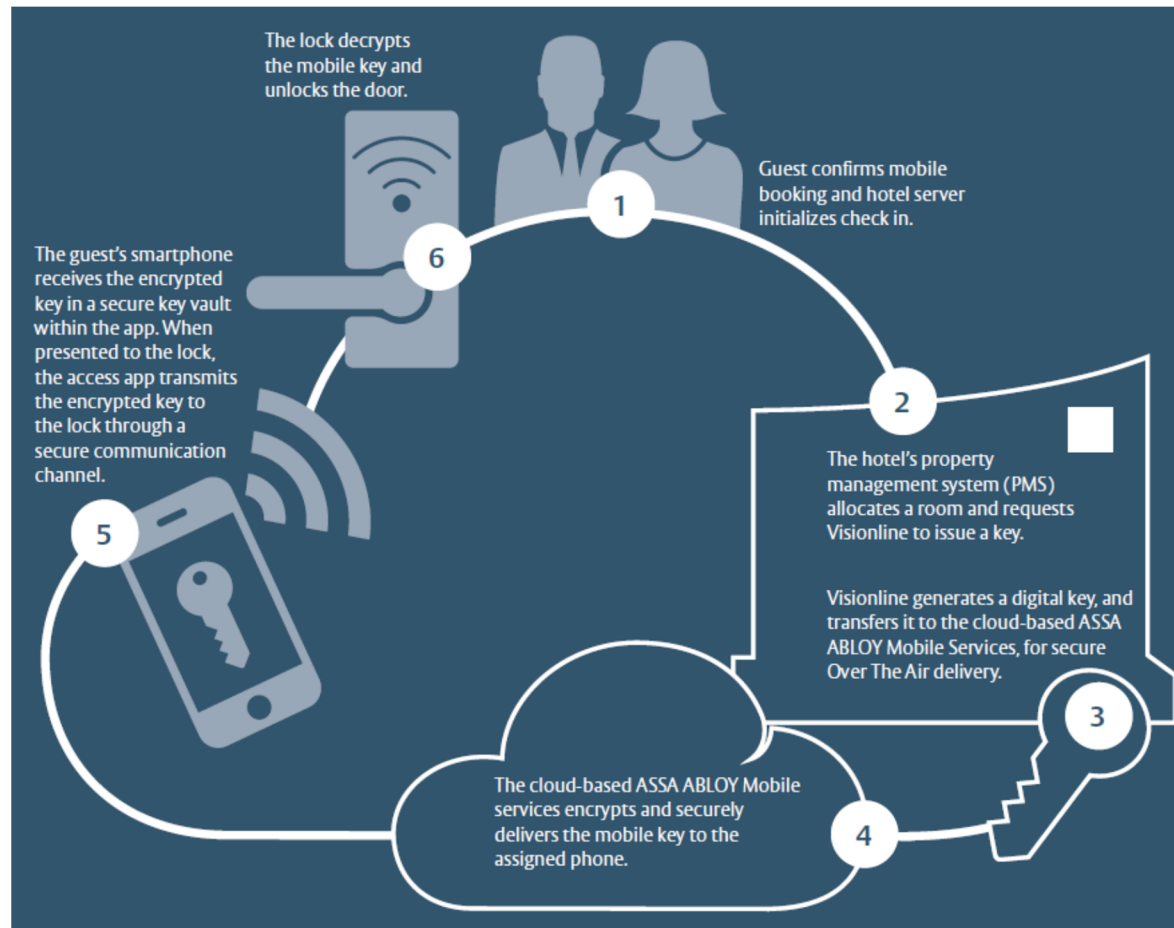
<https://www.assaabloyglobalsolutions.com/en/hospitality-solutions>

Claim 8



<https://www.assaabloyglobalsolutions.com/en/hospitality-solutions>

Claim 8



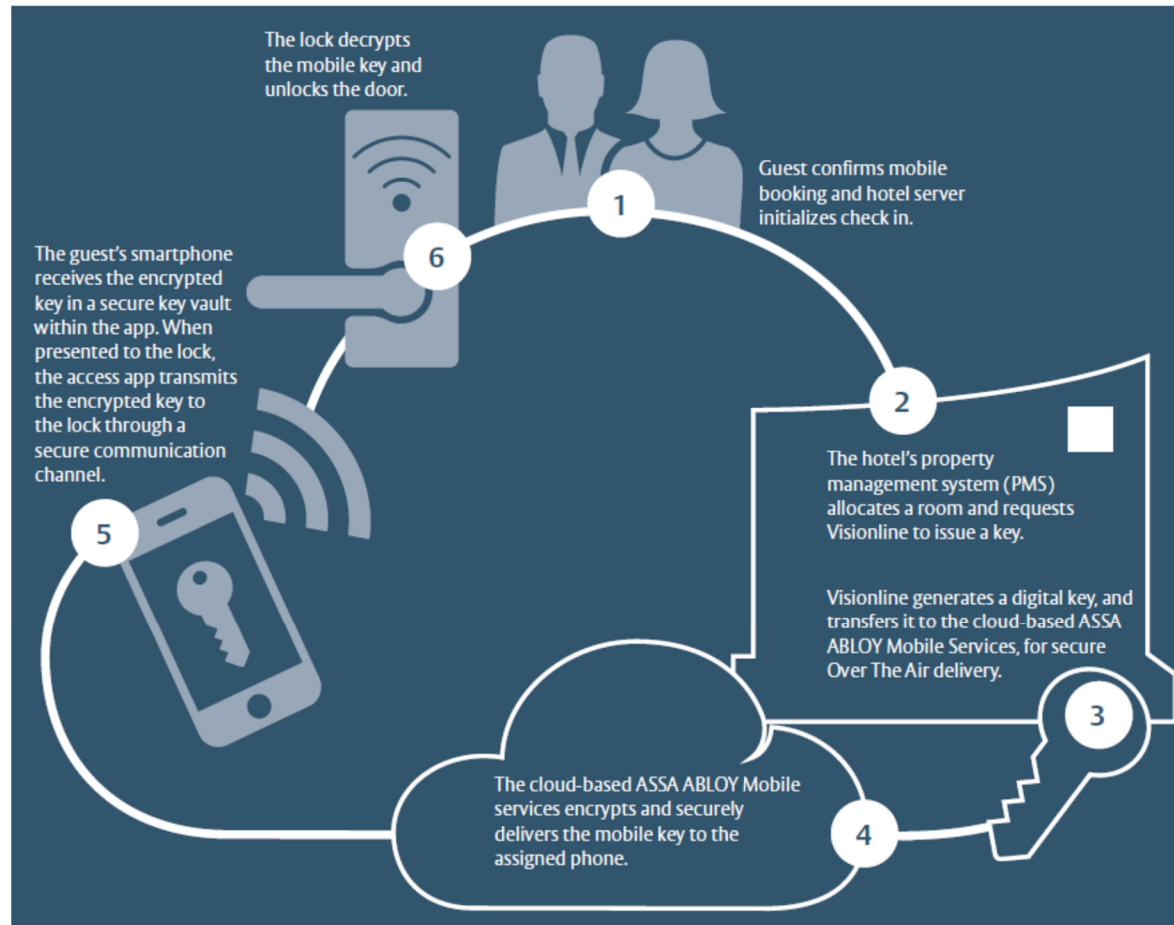
Mobile Access Brochure, p. 9.

Claim 8	
	HOW IT WORKS - PROPERTY PERSPECTIVE  The diagram illustrates a five-step process for mobile access from a property perspective. Each step is represented by an icon and a numbered description: Step 1: Property receives reservation confirmation from guest. The icon shows a computer monitor with a calendar displaying the number 24. Step 2: Notify guest of registration options. The icon shows a computer monitor with a calendar, a Wi-Fi signal icon, and silhouettes of a man and a woman. Step 3: Assign guest room. The icon shows a computer monitor displaying 'AVAILABLE ROOMS' with options 101, 102, and 103, a Wi-Fi signal icon, and a smartphone displaying '101'. Step 4: Send guest digital key. The icon shows a computer monitor with a key icon, a Wi-Fi signal icon, and a smartphone with a key icon. Step 5: Key is automatically cancelled upon guest checkout. The icon shows a computer monitor with a clock icon, a Wi-Fi signal icon, and a smartphone with a crossed-out key icon. https://www.assaabloyglobalsolutions.com/downloads/product-sheets/mobile-access/Mobile-Access-App-Product-Sheet-EN.pdf

Claim 9	
9. The access control system of claim 8, wherein the communication setting is specific to the access device.	ASSA's access control system practice each element of claim 8 and wherein the communication setting is specific to the access device. On information and belief, the Bluetooth communication setting is specific to the access device for a given hotel room door lock to ensure that only the hotel guest with a reservation for a given room is able to communication with the access device. 

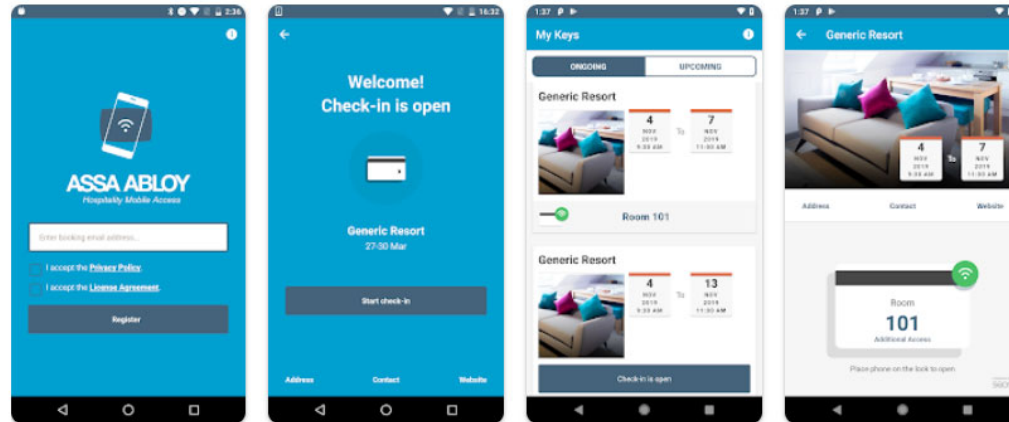
Claim 9

ASSA ABLOY Mobile Access Solutions Brochure, p. 1 (the “Mobile Access Brochure”).



Mobile Access Brochure, p. 9.

Claim 9



About this app →

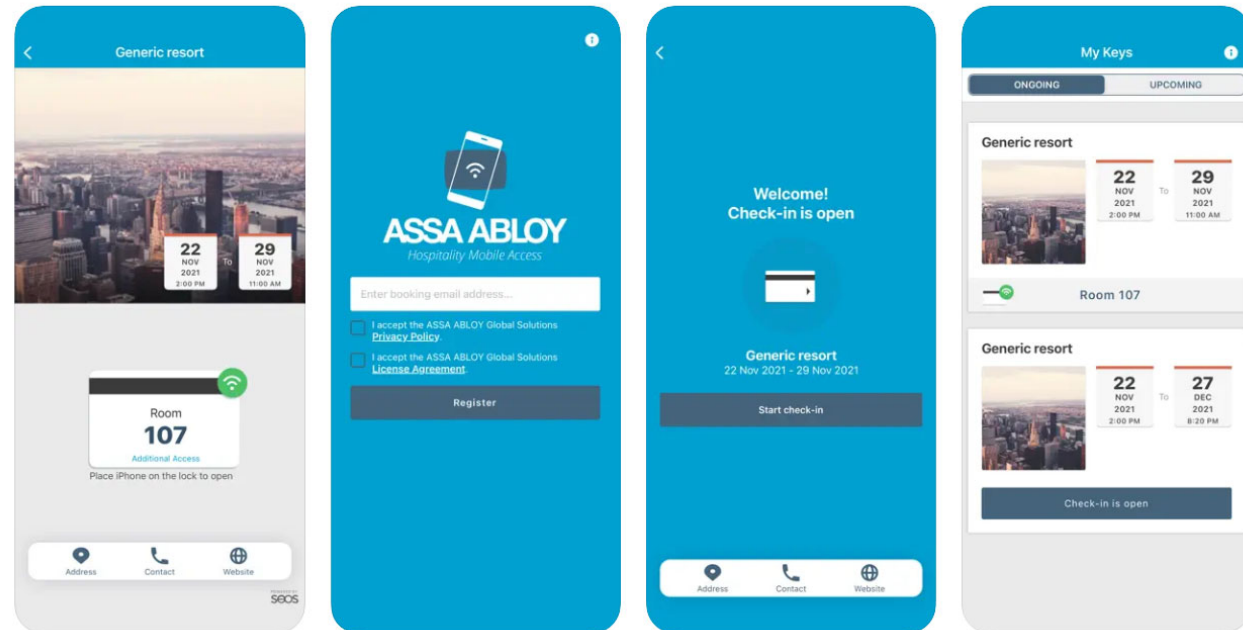
With ASSA ABLOY Hospitality Mobile Access you can check in to your hotel room before you arrive and receive your room key direct to your phone. When you arrive at the hotel, go straight to your room and open the door by holding your phone up against the lock. Your hotel key is securely delivered and stored inside your device and you don't need to worry about a keycard.

ASSA ABLOY Hospitality Mobile Access is available at select hotels around the world.

....
https://play.google.com/store/apps/details?id=com.assaabloy.hospitality.mobileaccess.hospitalitymobileaccess&hl=en_US&gl=US

Claim 9

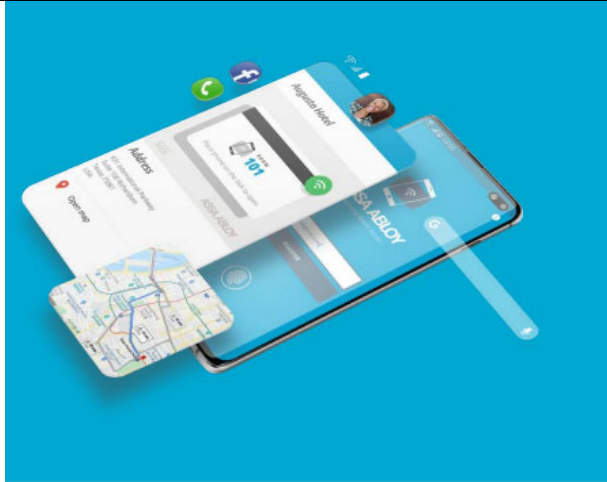
Screenshots iPad iPhone



<https://apps.apple.com/us/app/hospitality-mobile-access/id1017290566?platform=iphone>

Claim 9	
	Open your hotel room with your iPhone! With ASSA ABLOY Global Solutions Mobile Access you can check in to your hotel room before you arrive and receive your room key direct to your phone. When you arrive at the hotel, go straight to your room and open the door by holding your phone up against the lock. Your hotel key is securely delivered and stored inside your device and you don't need to worry about a keycard. ASSA ABLOY Global Solutions Mobile Access is available at selected hotels around the world. About our Mobile Access solution: The Mobile Access solution from ASSA ABLOY Global Solutions makes VingCard RFID locks operable with mobile devices through BLE (Bluetooth Low Energy) technology. The solution platform includes highly reliable and secure mobile key management and Trusted Service Manager (TSM) services. ASSA ABLOY Global Solutions Mobile Access is powered by award winning Seos® technology from ASSA ABLOY, learn more on our web site. https://apps.apple.com/us/app/hospitality-mobile-access/id1017290566?platform=iphone

Claim 9



Unique User Experience

Mobile Access offers guests a whole new hotel experience. Depending on the solution deployed they can reserve and book their room using their mobile phone or device. They can then use the phone to check in and check out.

<https://www.assaabloyglobalsolutions.com/en/hospitality-solutions>

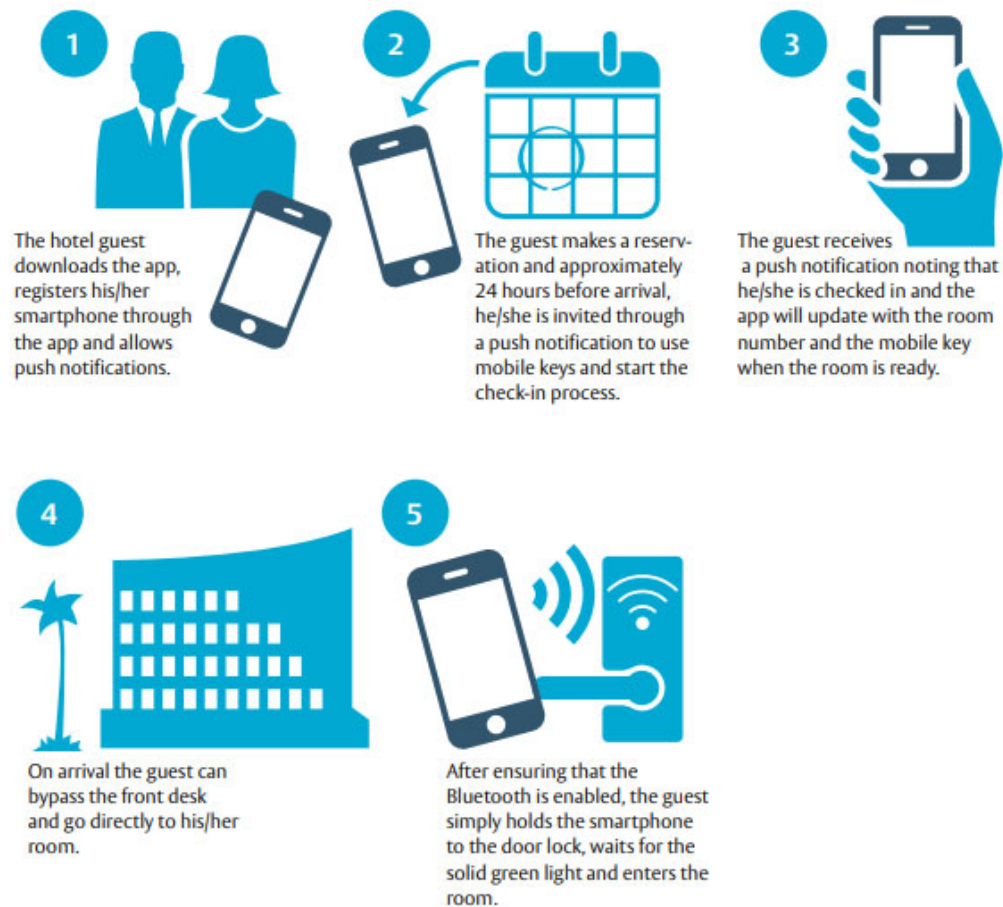
Claim 9

How It Works?

- 1 Download the application.
- 2 Make the reservation.
- 3 Check into the room.
- 4 Bypass frontdesk upon arrival and go to the room.
- 5 Open door with the use of mobile application / mobile key.

<https://www.assaabloyglobalsolutions.com/en/hospitality-solutions>

Claim 9

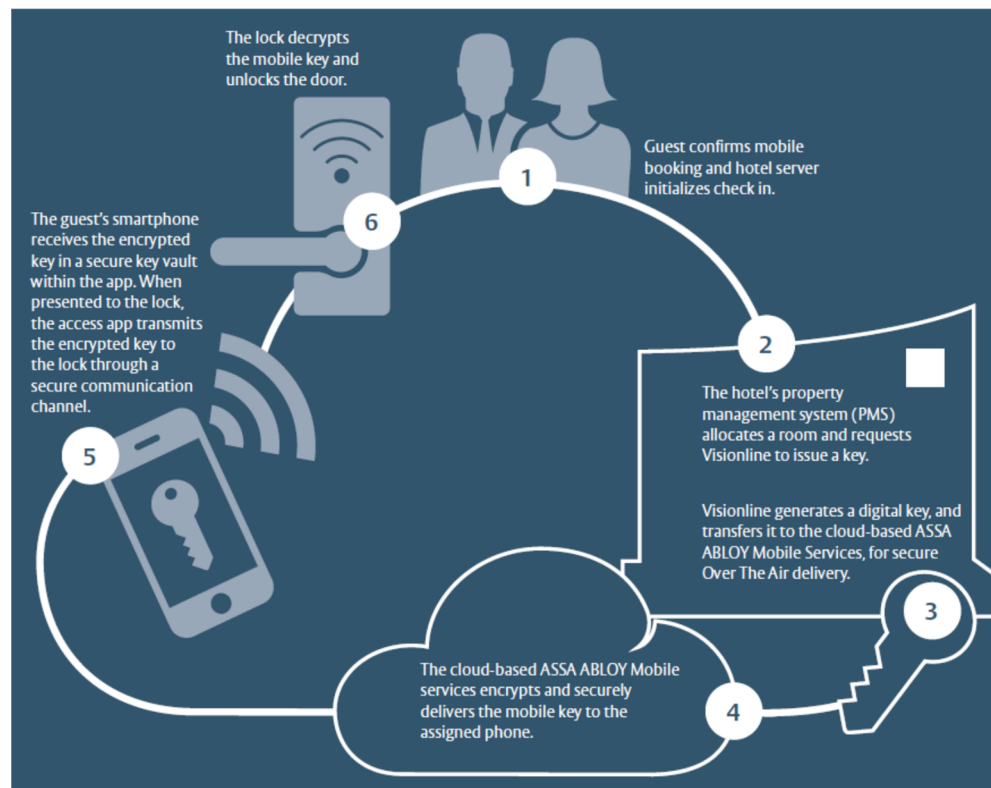


<https://www.assaabloyglobalsolutions.com/en/hospitality-solutions>

Claim 10

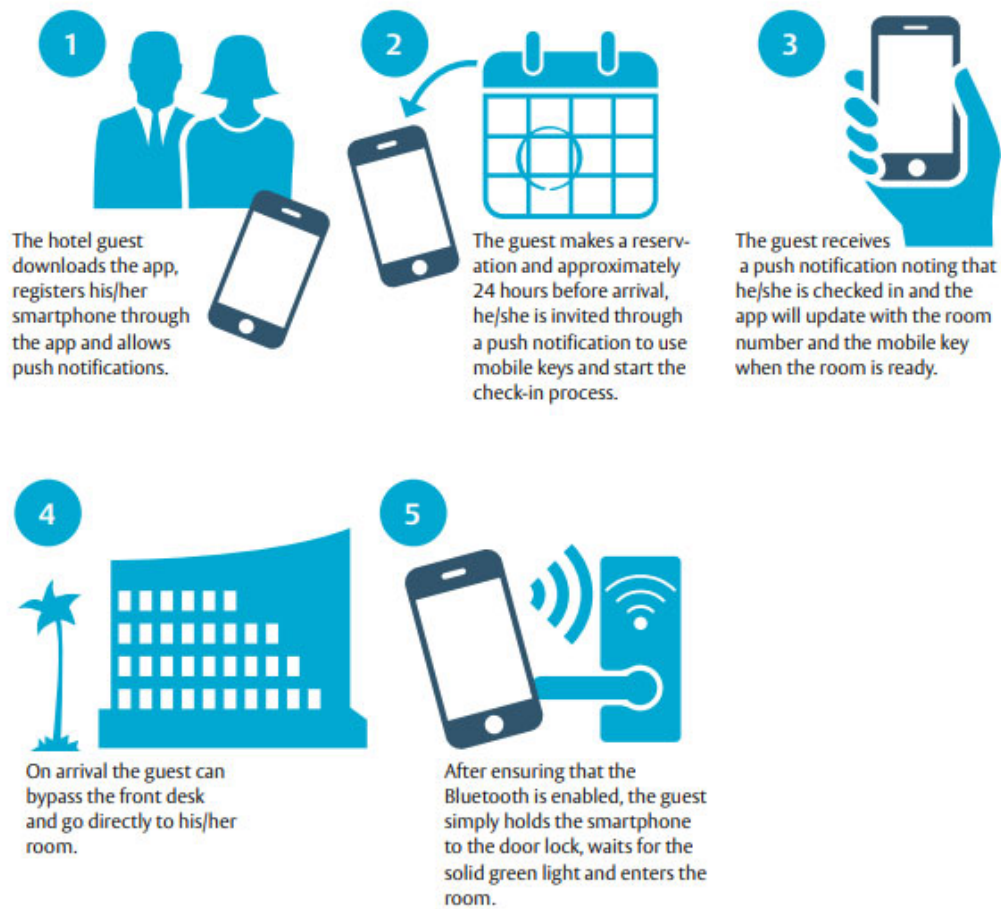
10. The access control system of claim 9, wherein the application notifies the user of proximity to the access device.

ASSA's system includes, uses (and ASSA instructs end users to use), and/or practices each element of Claim 9 and wherein the application notifies the user of proximity to the access device.



Mobile Access Brochure, p. 9.

Claim 10



<https://www.assaabloyglobalsolutions.com/en/hospitality-solutions>

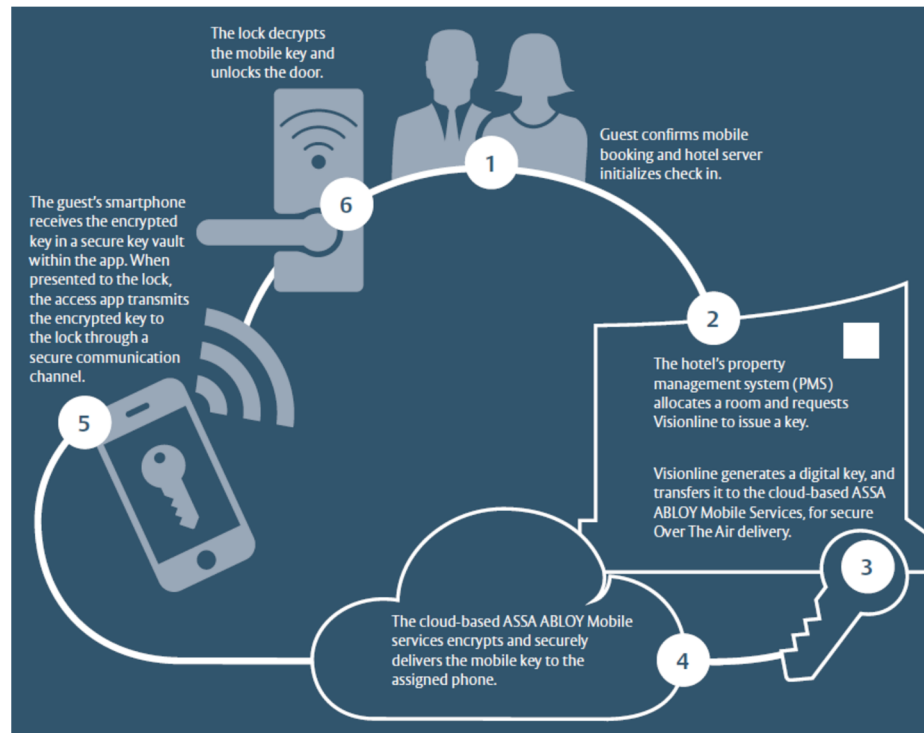
Claim 10	
	 <u>After ensuring that the Bluetooth is enabled</u>, the guest simply holds the smartphone to the door lock, waits for the solid green light and enters the room. Mobile Access Brochure, p. 6.

Claim 11	
11. The access control system of claim 8, wherein the communication module does not advertise that the communication module is present.	ASSA's system includes, uses (and ASSA instructs end users to use), and/or practices each element of Claim 8 and wherein the communication module does not advertise that the communication module is present. The ASSA system's communication module (<i>e.g.</i>, a Bluetooth module, <i>etc.</i>) does not advertise that it is present.

Claim 12

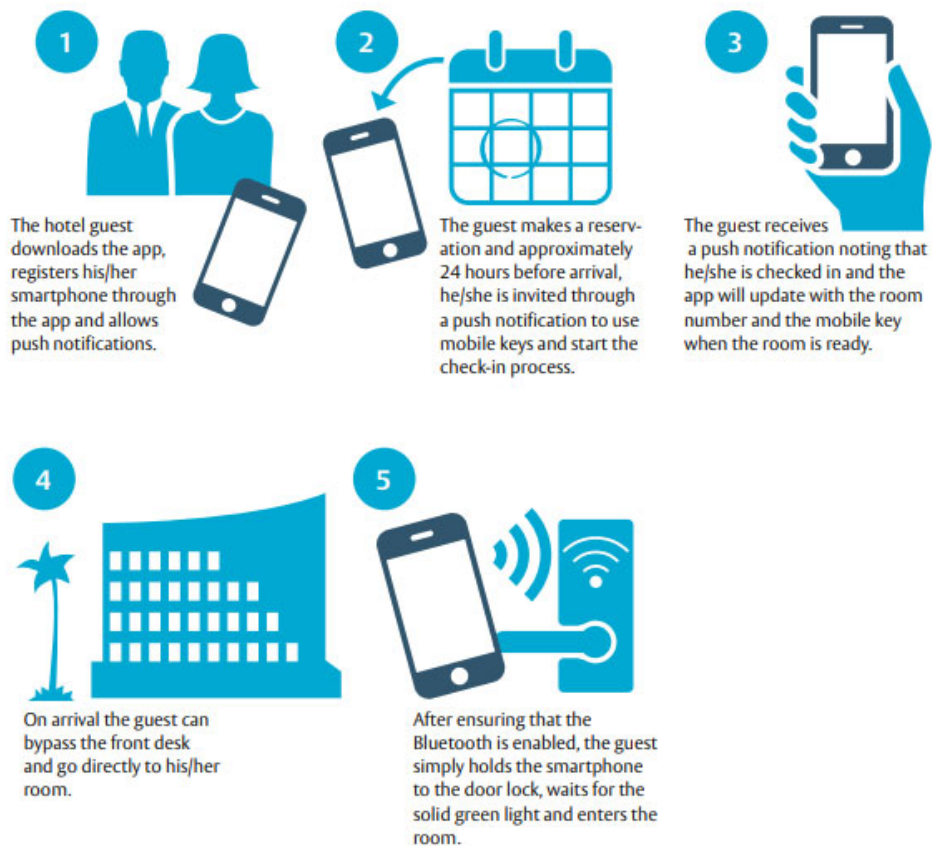
12. The access control system of claim 8, wherein the application uses Bluetooth to communicate with the access device and the communication setting comprises a Bluetooth ID.

ASSA's system includes and/or uses (and ASSA instructs end users to use) an application, wherein the application uses Bluetooth to communicate with the access device and the communication setting comprises a Bluetooth ID. ASSA's Mobile App uses Bluetooth, including a Bluetooth ID, to communicate with the access device.



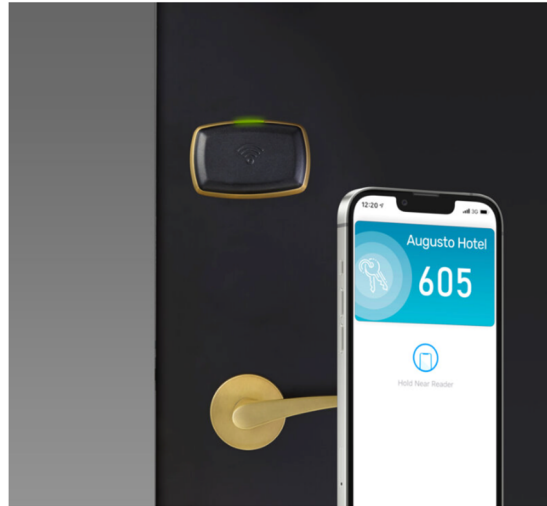
Mobile Access Brochure, p. 9.

Claim 12



<https://www.assaabloyglobalsolutions.com/en/hospitality-solutions>

Claim 12



Step 3: Activate Mobile Access

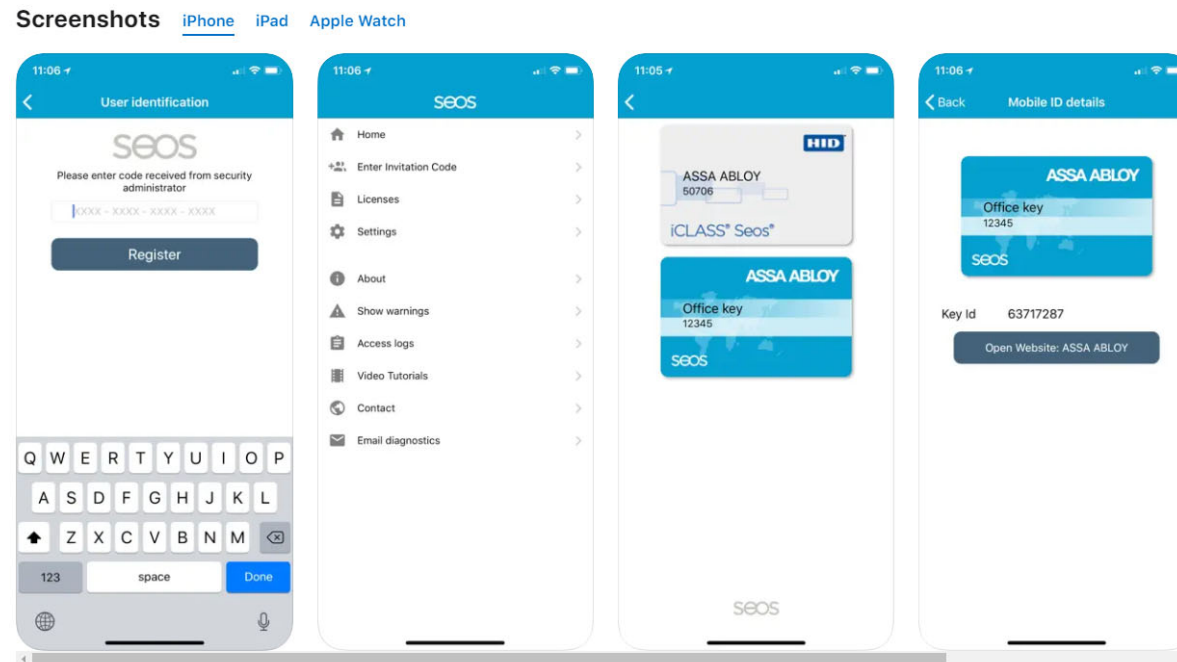
Without replacing existing hardware and with the addition of a Bluetooth Low Energy (BLE) reader, your property and guests can seamlessly begin to enjoy the contactless benefits of the technology.

<https://www.assaabloyglobalsolutions.com/en/hospitality-solutions/mobile-access-for-hospitality/rfid-upgrade>

Claim 13

13. The access control system of claim 8, wherein the application uses Wi-Fi to communicate with the access device and the communication setting comprises a network SSID.

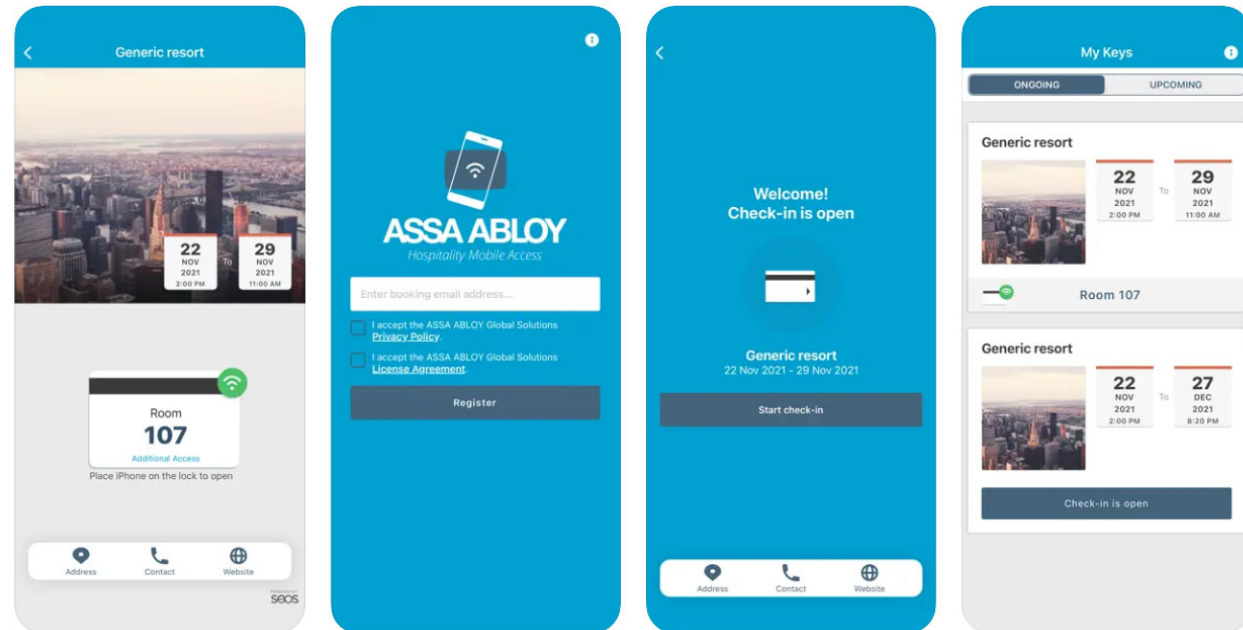
ASSA's system includes, uses (and ASSA instructs end users to use), and/or practices each element of Claim 8 and wherein the application uses Wi-Fi to communicate with the access device and the communication setting comprises a network SSID.



<https://apps.apple.com/us/app/assa-abloy-mobile-access/id793869814>

Claim 13

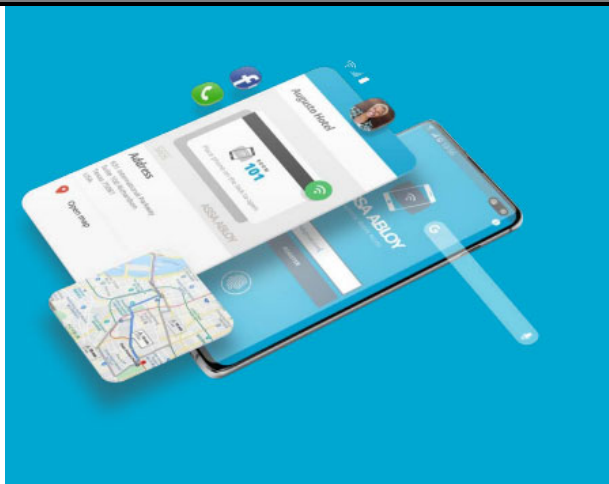
Screenshots iPad iPhone



<https://apps.apple.com/us/app/hospitality-mobile-access/id1017290566?platform=iphone>

Claim 13	
	Open your hotel room with your iPhone! With ASSA ABLOY Global Solutions Mobile Access you can check in to your hotel room before you arrive and receive your room key direct to your phone. When you arrive at the hotel, go straight to your room and open the door by holding your phone up against the lock. Your hotel key is securely delivered and stored inside your device and you don't need to worry about a keycard. ASSA ABLOY Global Solutions Mobile Access is available at selected hotels around the world. About our Mobile Access solution: The Mobile Access solution from ASSA ABLOY Global Solutions makes VingCard RFID locks operable with mobile devices through BLE (Bluetooth Low Energy) technology. The solution platform includes highly reliable and secure mobile key management and Trusted Service Manager (TSM) services. ASSA ABLOY Global Solutions Mobile Access is powered by award winning Seos® technology from ASSA ABLOY, learn more on our web site. https://apps.apple.com/us/app/hospitality-mobile-access/id1017290566?platform=iphone

Claim 13



Unique User Experience

Mobile Access offers guests a whole new hotel experience. Depending on the solution deployed they can reserve and book their room using their mobile phone or device. They can then use the phone to check in and check out.

<https://www.assaabloyglobalsolutions.com/en/hospitality-solutions>

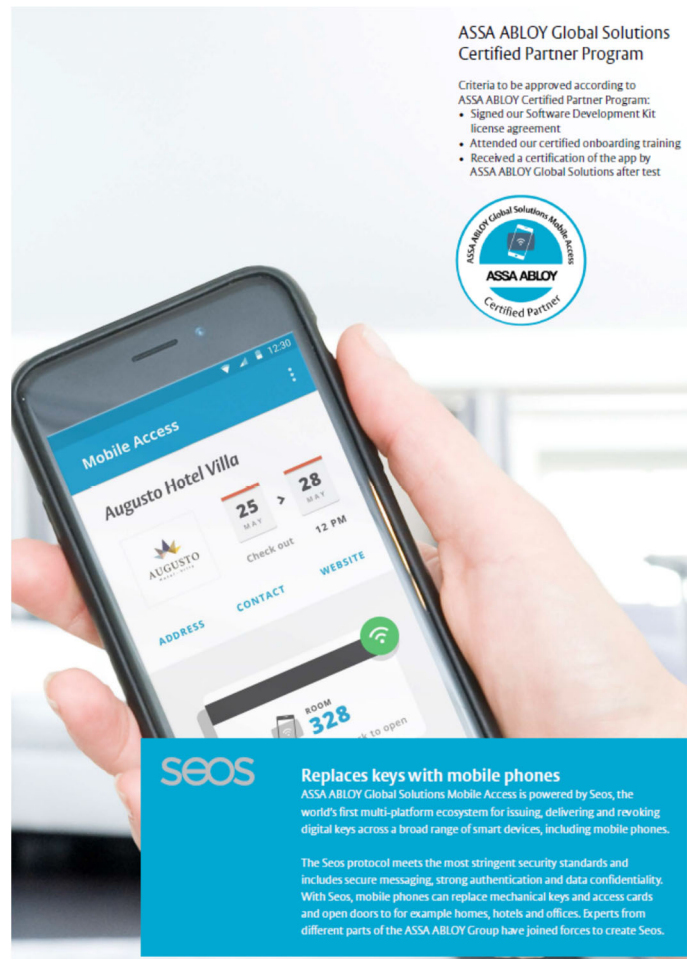
Claim 13

How It Works?

- 1 Download the application.
- 2 Make the reservation.
- 3 Check into the room.
- 4 Bypass frontdesk upon arrival and go to the room.
- 5 Open door with the use of mobile application / mobile key.

<https://www.assaabloyglobalsolutions.com/en/hospitality-solutions>

Claim 13



**ASSA ABLOY Global Solutions
Certified Partner Program**

Criteria to be approved according to
ASSA ABLOY Certified Partner Program:

- Signed our Software Development Kit license agreement
- Attended our certified onboarding training
- Received a certification of the app by ASSA ABLOY Global Solutions after test



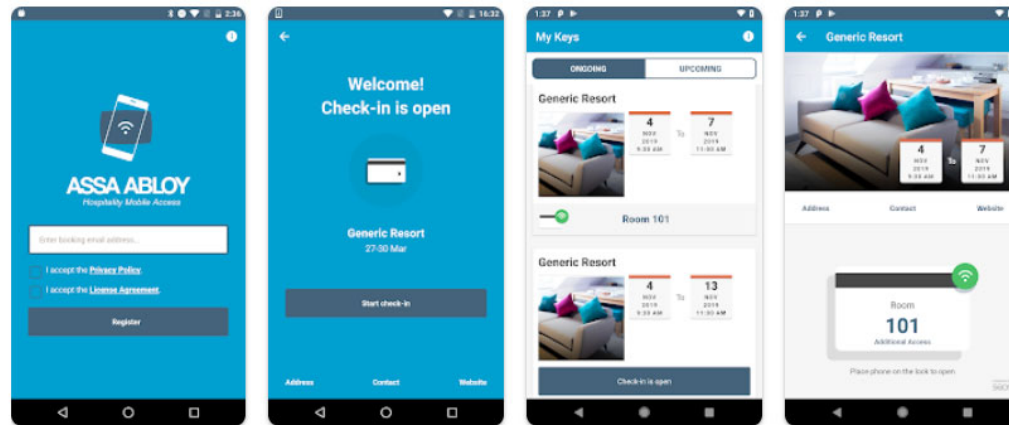
seos Replaces keys with mobile phones

ASSA ABLOY Global Solutions Mobile Access is powered by Seos, the world's first multi-platform ecosystem for issuing, delivering and revoking digital keys across a broad range of smart devices, including mobile phones.

The Seos protocol meets the most stringent security standards and includes secure messaging, strong authentication and data confidentiality. With Seos, mobile phones can replace mechanical keys and access cards and open doors to for example homes, hotels and offices. Experts from different parts of the ASSA ABLOY Group have joined forces to create Seos.

Mobile Access Brochure, p. 5.

Claim 13



About this app →

With ASSA ABLOY Hospitality Mobile Access you can check in to your hotel room before you arrive and receive your room key direct to your phone. When you arrive at the hotel, go straight to your room and open the door by holding your phone up against the lock. Your hotel key is securely delivered and stored inside your device and you don't need to worry about a keycard.

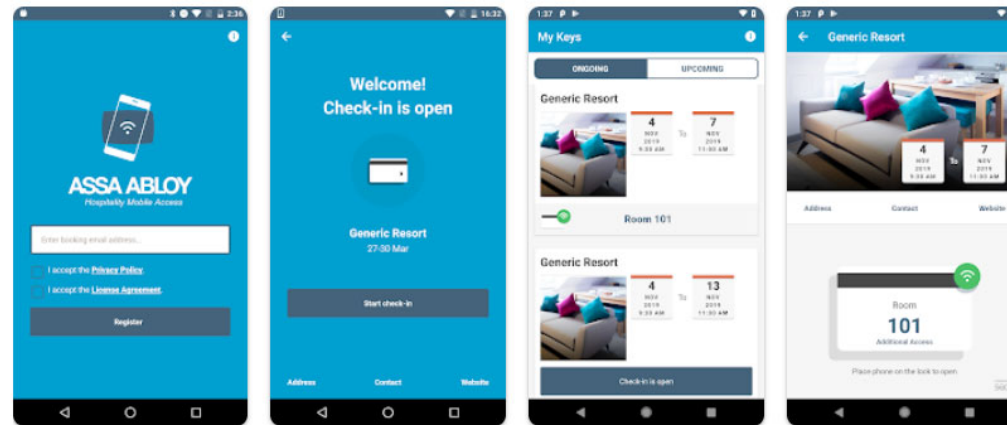
ASSA ABLOY Hospitality Mobile Access is available at select hotels around the world.

...
https://play.google.com/store/apps/details?id=com.assaabloy.hospitality.mobileaccess.hospitalitymobileaccess&hl=en_US&gl=US

Claim 14

14. The access control system of claim 8, wherein the reservation certificate comprises the communication setting.

ASSA's system includes, uses (and ASSA instructs end users to use), and/or practices each element of Claim 8 and wherein the reservation certificate comprises the communication setting.



About this app →

With ASSA ABLOY Hospitality Mobile Access you can check in to your hotel room before you arrive and receive your room key direct to your phone. When you arrive at the hotel, go straight to your room and open the door by holding your phone up against the lock. Your hotel key is securely delivered and stored inside your device and you don't need to worry about a keycard.

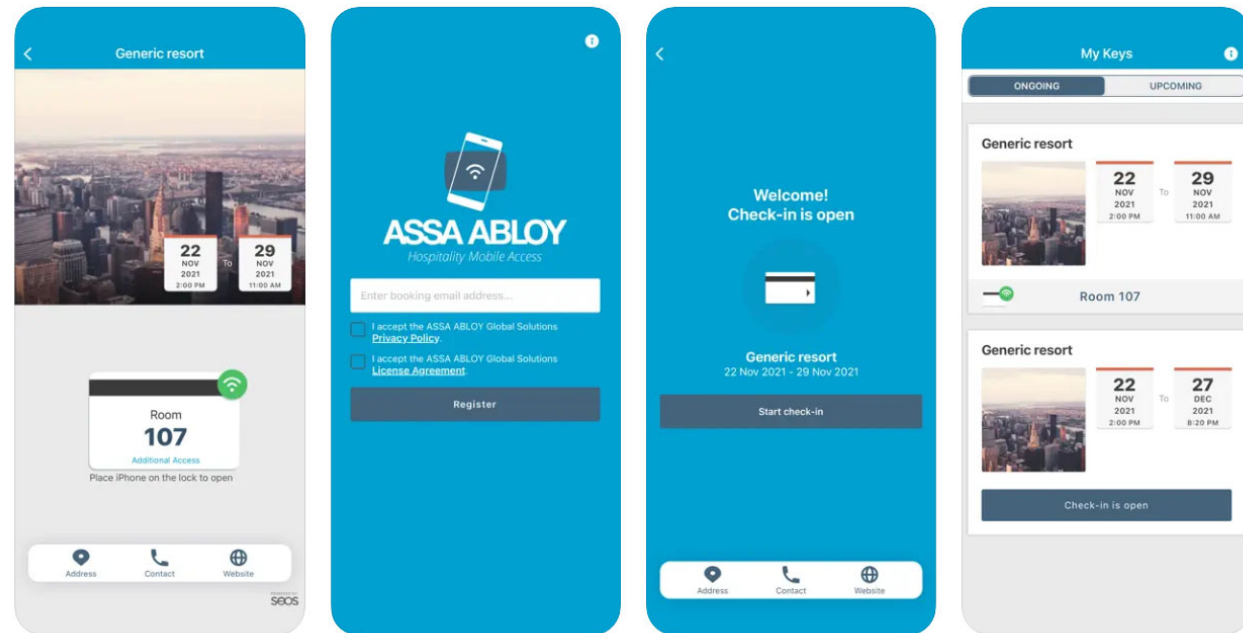
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...

https://play.google.com/store/apps/details?id=com.assaabloy.hospitality.mobileaccess.hospitalitymobileaccess&hl=en_US&gl=US

Claim 14

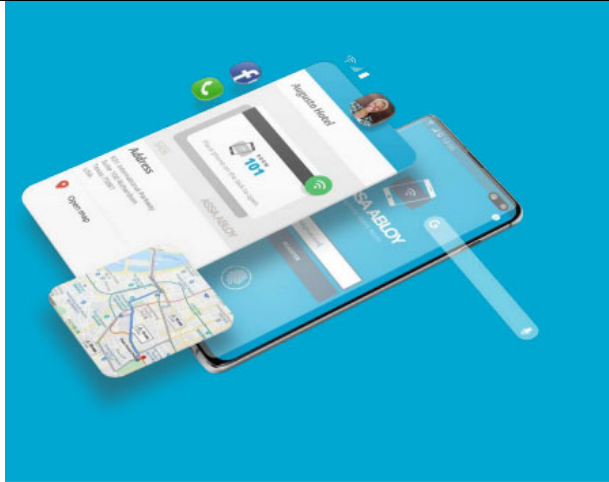
Screenshots iPad iPhone



<https://apps.apple.com/us/app/hospitality-mobile-access/id1017290566?platform=iphone>

Claim 14	
	Open your hotel room with your iPhone! With ASSA ABLOY Global Solutions Mobile Access you can check in to your hotel room before you arrive and receive your room key direct to your phone. When you arrive at the hotel, go straight to your room and open the door by holding your phone up against the lock. Your hotel key is securely delivered and stored inside your device and you don't need to worry about a keycard. ASSA ABLOY Global Solutions Mobile Access is available at selected hotels around the world. About our Mobile Access solution: The Mobile Access solution from ASSA ABLOY Global Solutions makes VingCard RFID locks operable with mobile devices through BLE (Bluetooth Low Energy) technology. The solution platform includes highly reliable and secure mobile key management and Trusted Service Manager (TSM) services. ASSA ABLOY Global Solutions Mobile Access is powered by award winning Seos® technology from ASSA ABLOY, learn more on our web site. https://apps.apple.com/us/app/hospitality-mobile-access/id1017290566?platform=iphone

Claim 14



Unique User Experience

Mobile Access offers guests a whole new hotel experience. Depending on the solution deployed they can reserve and book their room using their mobile phone or device. They can then use the phone to check in and check out.

<https://www.assaabloyglobalsolutions.com/en/hospitality-solutions>

Claim 14

How It Works?

- 1 Download the application.
- 2 Make the reservation.
- 3 Check into the room.
- 4 Bypass frontdesk upon arrival and go to the room.
- 5 Open door with the use of mobile application / mobile key.

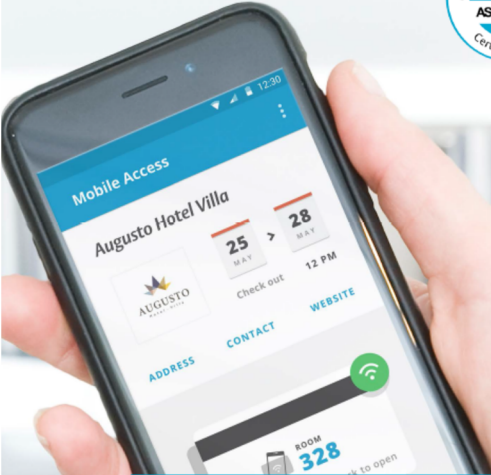
<https://www.assaabloyglobalsolutions.com/en/hospitality-solutions>

Claim 14

ASSA ABLOY Global Solutions
Certified Partner Program

Criteria to be approved according to
ASSA ABLOY Certified Partner Program:

- Signed our Software Development Kit license agreement
- Attended our certified onboarding training
- Received a certification of the app by ASSA ABLOY Global Solutions after test



seos Replaces keys with mobile phones

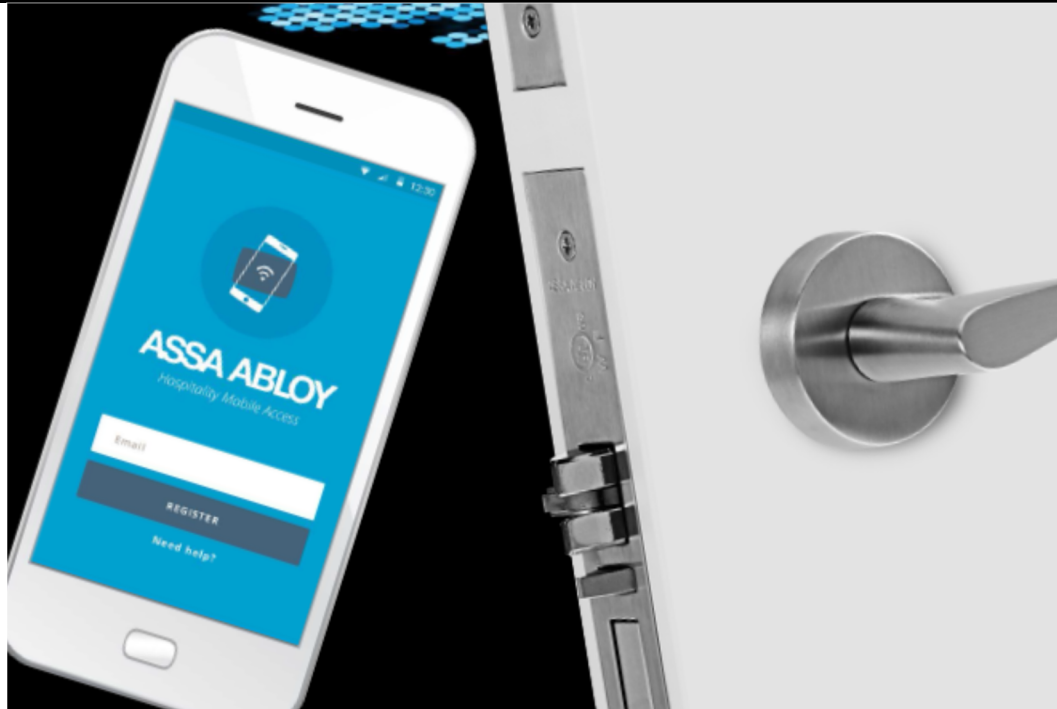
ASSA ABLOY Global Solutions Mobile Access is powered by Seos, the world's first multi-platform ecosystem for issuing, delivering and revoking digital keys across a broad range of smart devices, including mobile phones.

The Seos protocol meets the most stringent security standards and includes secure messaging, strong authentication and data confidentiality. With Seos, mobile phones can replace mechanical keys and access cards and open doors to for example homes, hotels and offices. Experts from different parts of the ASSA ABLOY Group have joined forces to create Seos.

Mobile Access Brochure, p. 5.

Claim 15	
15. An access control system comprising: an access device comprising a communication module connected to a processor having control of a door lock;	ASSA ABLOY AB, ASSAY ABLOY Mobile Services AB, and ASSA ABLOY Global Solutions AB (“ASSA”) make, use (including via testing), sell, import, and/or offer for sale, and instruct their subsidiaries, affiliates, and end users to use the ASSA ABLOY Global Solutions Mobile Access technology and associated App (“Mobile App”) feature as a key to a hotel room by using, among other technologies, integrated SEOS technology (which “Replaces Keys with Mobile Phones”), VingCard Classic Electronic Locks and VingCard Essence Electronic Locks and associated Bluetooth readers including, but not limited to, Bluetooth Low Energy readers, and processors included therein, and the associated hardware, software, applications, and functionality associated with this product and solution (hereinafter, the “Accused Products”), constituting an access control system comprising: an access device comprising a communication module connected to a processor having control of a door lock.

Claim 15

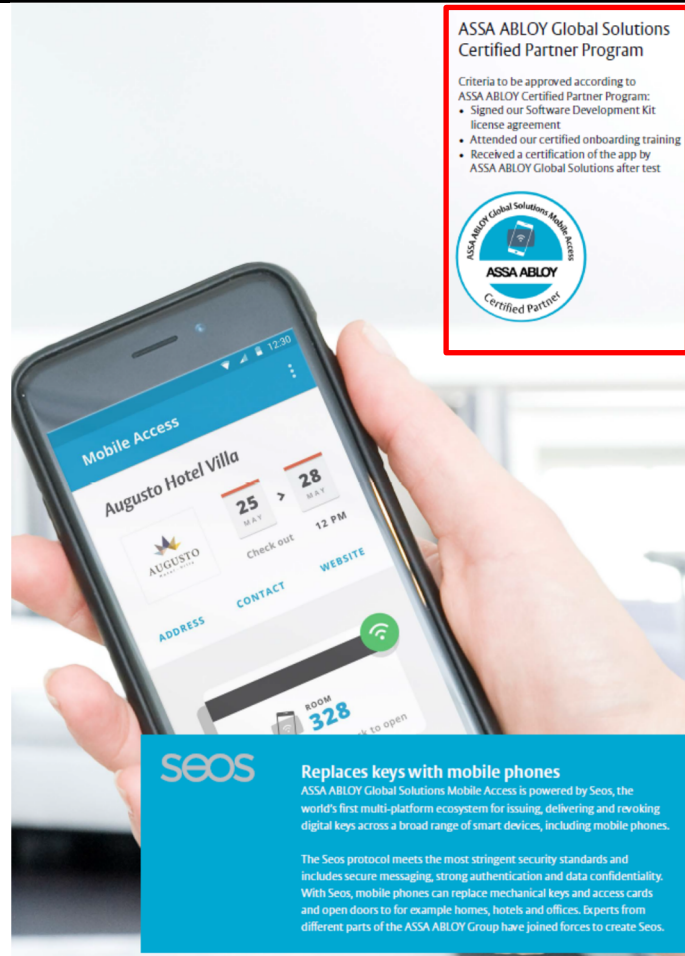


ASSA ABLOY Mobile Access Solutions Brochure, p. 1 (the “Mobile Access Brochure”).

ASSA also instructs and encourages others to use its Mobile Access Software Development kit (SDK) as integrated into their hotel customers mobile applications, which provides substantively identical features and functionality as the Mobile App.

Claim 15	
	 ASSA ABLOY Global Solutions Mobile Access App This is our own ready-to-use, off-the-shelf solution. The app suits hotels that want to provide basic mobile access solutions to their guests in a simple to use format. There are no integrations or third-party dependencies required. We publish a general app that is available in the App Store and on Google Play. Through an administration portal, hotels can customize their digital key graphics to reflect company branding or design. This will then show in a "Passbook" inspired style for the hotel to use.  Customer Integration This solution is created for hotels with their own app initiatives that want to integrate mobile access into their own apps and back end systems. <u>ASSA ABLOY Global Solutions provides a Mobile Access Software Development kit (SDK) together with dedicated onboarding services to facilitate seamless integration.</u>  Third Party Certified Partner App This solution suits hotels that want mobile app functionality beyond just access control, but don't yet have their own in-house app initiatives. <u>They can here pick a solution from one of our selected app specialist partners, who through our Certified Partner Program already have integrated our mobile access functionality into their products.</u> Mobile Access Brochure, p. 4.

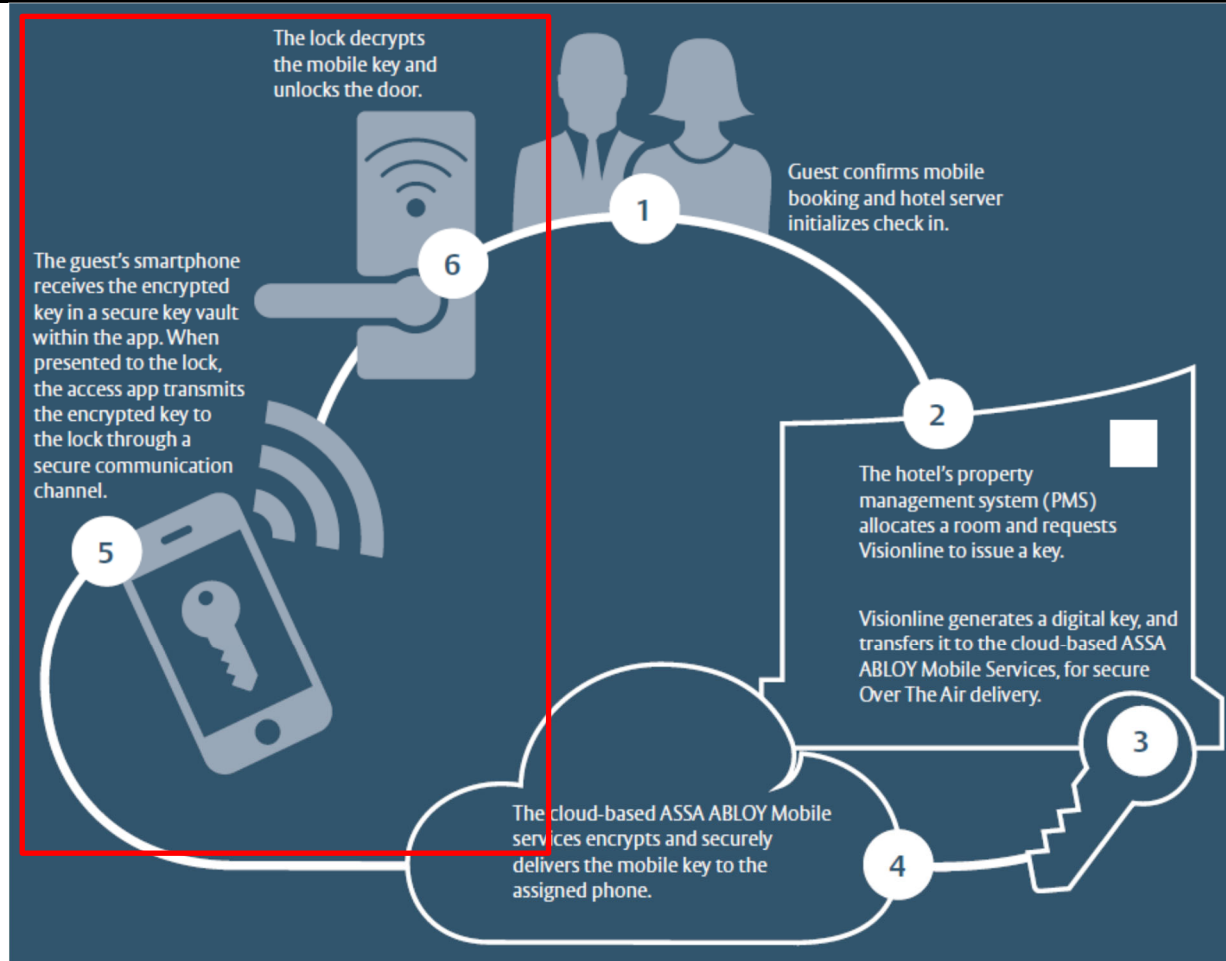
Claim 15



Mobile Access Brochure, p. 5.

Claim 15	
	A blue icon depicting a smartphone on the left and a door lock on the right. A blue line connects the two, with three curved lines above it representing a signal. A blue circle with the number '5' is positioned above the smartphone. After ensuring that the Bluetooth is enabled, <u>the guest simply holds the smartphone to the door lock, waits for the solid green light and enters the room.</u> Mobile Access Brochure, p. 6.

Claim 15



Mobile Access Brochure, p. 9.

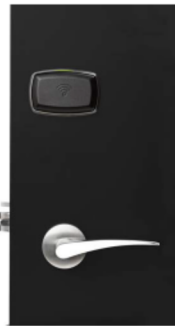
Claim 15

Lock system

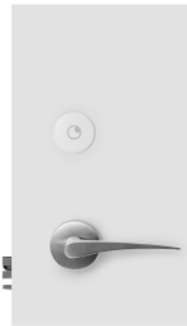
The latest generation of VingCard's RFID locks Classic, Signature, Essence and Allure are all compatible with Mobile Access. The only thing needed is to add a small Bluetooth Low Energy board to the lock.



Classic RFID



Signature RFID



Essence



Allure

Even with older versions of lock systems it's possible to install Mobile Access. You can keep most of the lock hardware and just upgrade the reader electronics to the latest RFID version and add the Bluetooth Low Energy board.

Software

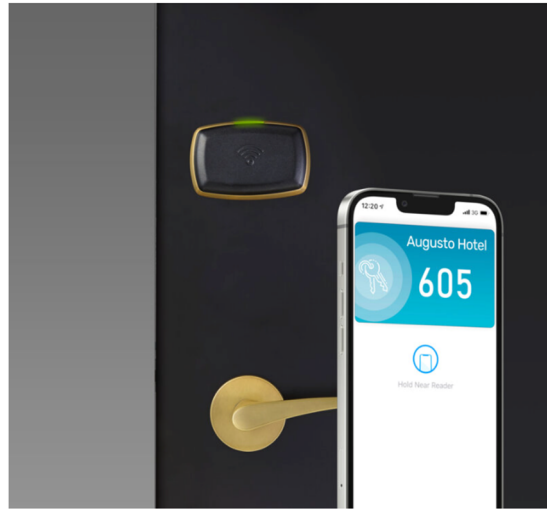
The latest version of Visionline is needed together with a Mobile Access license option.

It connects securely to the cloud-based ASSA ABLOY Global Solutions Mobile Access services.

Mobile Access Brochure, p. 8; *see also* Website

(<https://www.assaabloyglobalsolutions.com/en/hospitality-solutions/electronic-locks-for-hotels>)

Claim 15



Step 3: Activate Mobile Access

Without replacing existing hardware and with the addition of a Bluetooth Low Energy (BLE) reader, your property and guests can seamlessly begin to enjoy the contactless benefits of the technology.

<https://www.assaabloyglobalsolutions.com/en/hospitality-solutions/mobile-access-for-hospitality/rfid-upgrade>

Claim 15

Mobile Access Made Easy 2020

ASSA ABLOY Global Solutions Mobile Access

John Doe Operator

Press **Esc** to exit full screen

Reservations > New reservation

New reservation

Room number: 3609

Reference: booking

Check in: 2020-07-06

Check out: 2020-07-10

Add guests

New guest

Name: Jane Doe

Email: janedoe@mail.com

Common rooms

+ Add guest

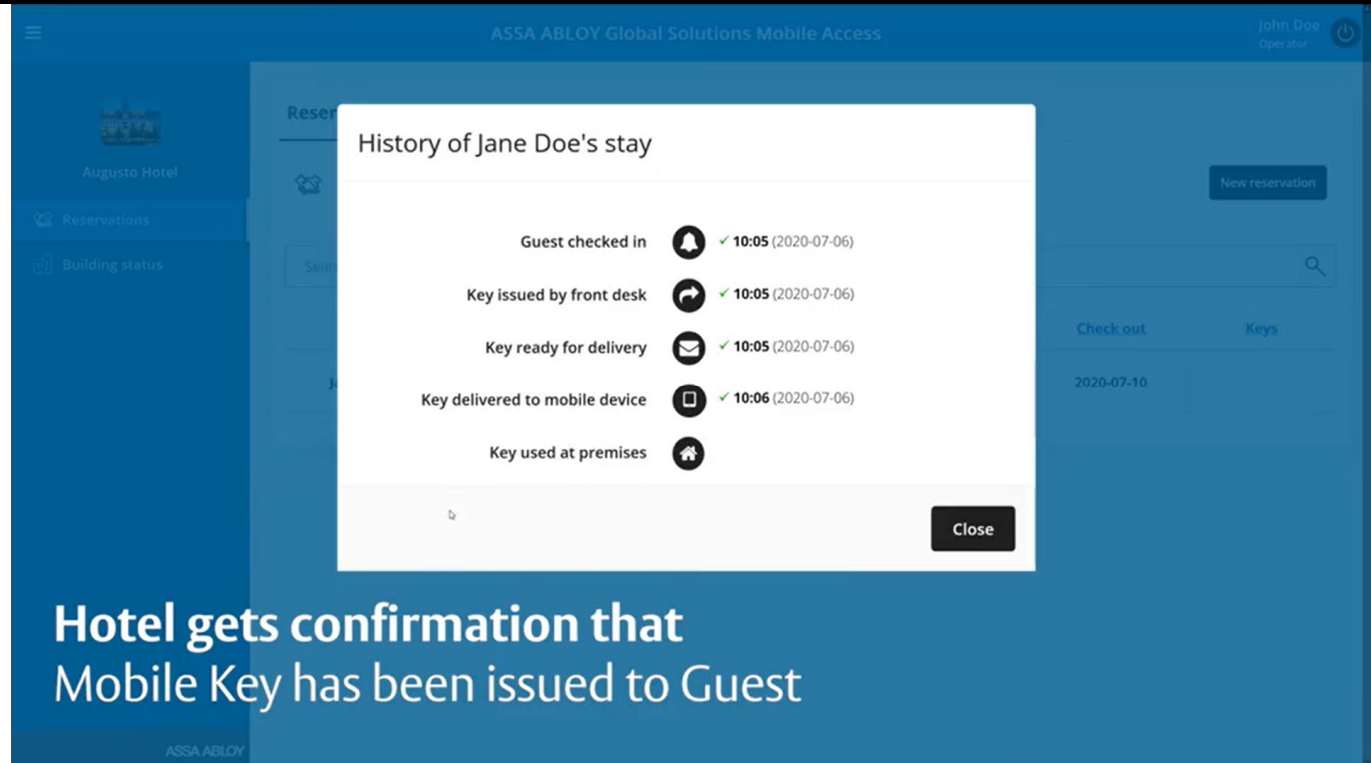
0:28 / 1:15

Scroll for details

Cancel

<https://youtu.be/YYvYMml-rj8>

Claim 15



**Hotel gets confirmation that
Mobile Key has been issued to Guest**

<https://youtu.be/YYvYMml-rj8>

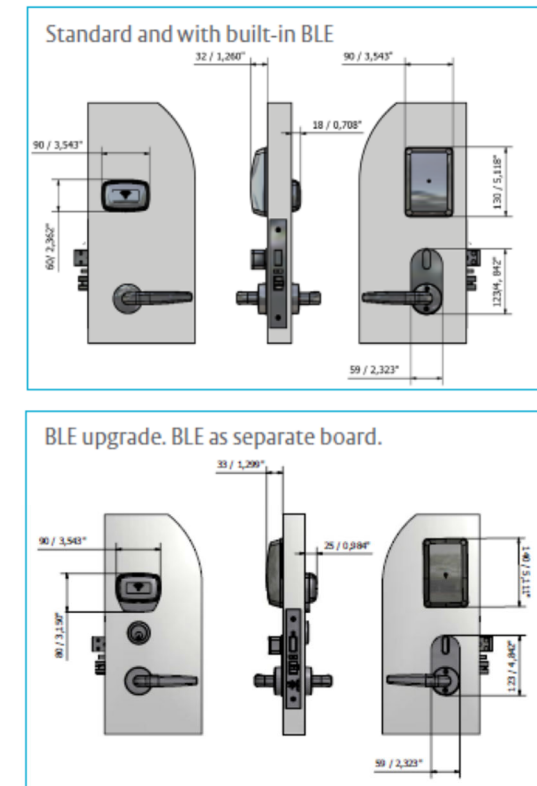
Claim 15

FEATURES

- : EPD (Environmental Product Declaration) certified
- : Supports the latest RFID technology
- : Supports Mobile Access
- : Online compatible
- : Easy upgrade from Signature Magstripe or Combo
- : Fire listed for use on fire doors (UL, BS, EN)
- : Case hardened full 1-inch (ANSI) throw deadbolt
- : Panic release function – the deadbolt and latch are automatically retracted by inside handle for easy regress in emergency situations
- : ADA compliant (users with physical disabilities)
- : Stainless steel parts for mechanical strength, corrosion resistance and attractive appearance
- : Optional high security mechanical override cylinder
- : Detailed audit trail: 3000 events in offline mode (Vostio and Visionline version 1.24 and above) and unlimited number of events in online mode
- : RFID Specifications:
 - 13,56MHz technology
 - Compatible with the following standards:
 - ISO 14443 A (MIFARE including Desfire)
 - ISO 14443 B
 - ISO 15693

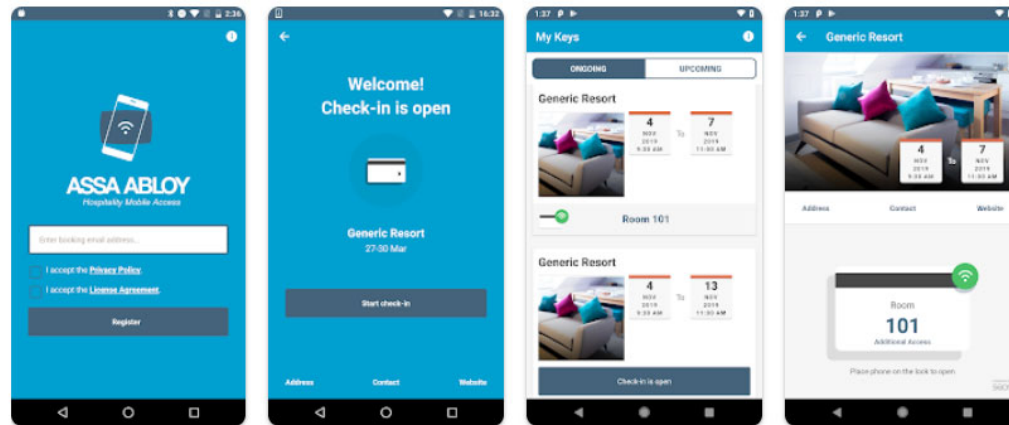
E.g., VingCard Signature RFID Product Sheet English, p. 1.

DIMENSIONS



Claim 15	
an application on a portable terminal; and	ASSA's access control system comprises an application on a portable terminal. ASSA's access control system comprises an app, including the ASSA Mobile App, that operates on a portable terminal, such as a smartphone. The image shows a white smartphone with a blue screen. The screen displays the 'ASSA ABLOY Hospitality Mobile Access' app. At the top, there is a circular icon with a smartphone and a Wi-Fi symbol. Below the icon, the text 'ASSA ABLOY' is prominently displayed, followed by 'Hospitality Mobile Access' in a smaller font. There is an 'Email' input field, a 'REGISTER' button, and a 'Need help?' link. The phone is positioned next to a silver door handle and lock mechanism, suggesting the app's use for access control. ASSA ABLOY Mobile Access Solutions Brochure, p. 1 (the "Mobile Access Brochure").

Claim 15



About this app →

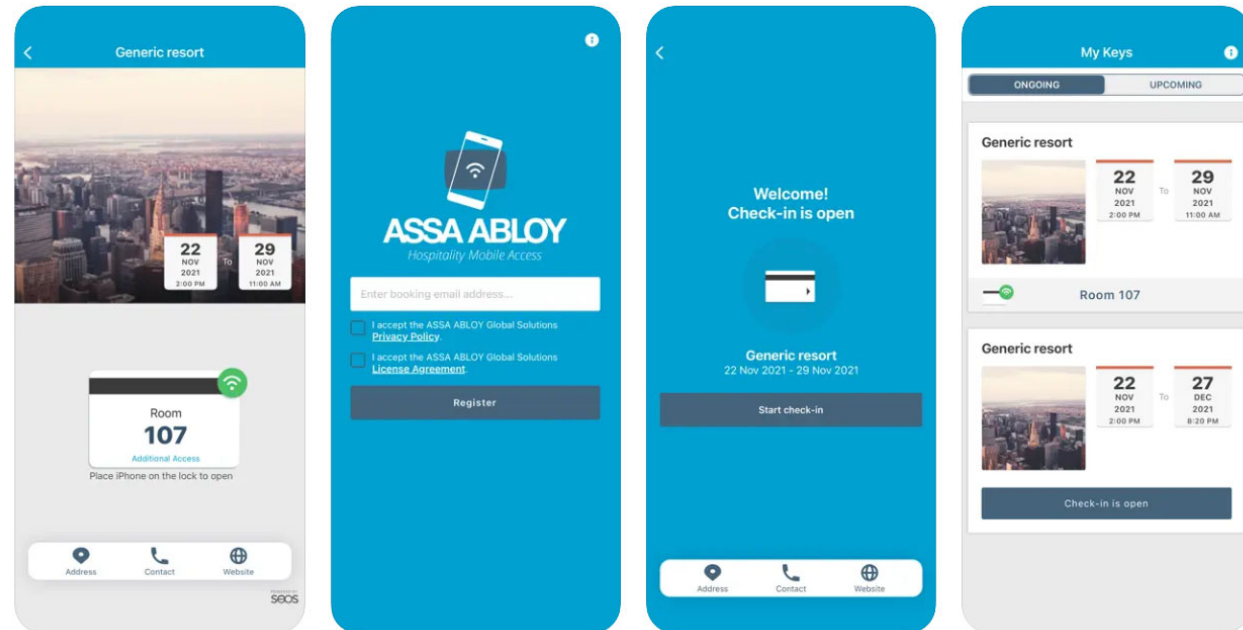
With ASSA ABLOY Hospitality Mobile Access you can check in to your hotel room before you arrive and receive your room key direct to your phone. When you arrive at the hotel, go straight to your room and open the door by holding your phone up against the lock. Your hotel key is securely delivered and stored inside your device and you don't need to worry about a keycard.

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https://play.google.com/store/apps/details?id=com.assaabloy.hospitality.mobileaccess.hospitalitymobileaccess&hl=en_US&gl=US

Claim 15

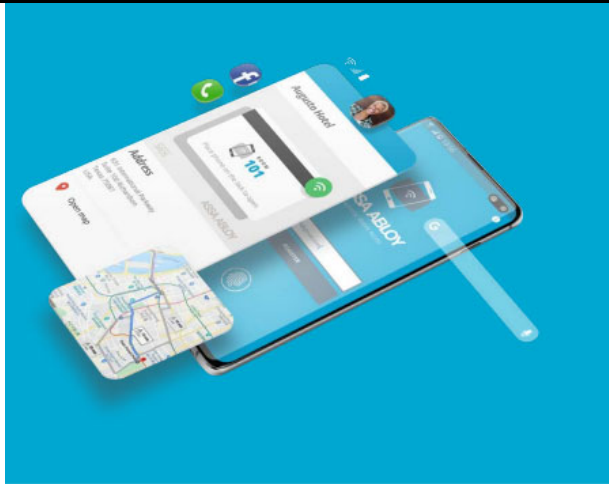
Screenshots iPad iPhone



<https://apps.apple.com/us/app/hospitality-mobile-access/id1017290566?platform=iphone>

Claim 15	
	Open your hotel room with your iPhone! With ASSA ABLOY Global Solutions Mobile Access you can check in to your hotel room before you arrive and receive your room key direct to your phone. When you arrive at the hotel, go straight to your room and open the door by holding your phone up against the lock. Your hotel key is securely delivered and stored inside your device and you don't need to worry about a keycard. ASSA ABLOY Global Solutions Mobile Access is available at selected hotels around the world. About our Mobile Access solution: The Mobile Access solution from ASSA ABLOY Global Solutions makes VingCard RFID locks operable with mobile devices through BLE (Bluetooth Low Energy) technology. The solution platform includes highly reliable and secure mobile key management and Trusted Service Manager (TSM) services. ASSA ABLOY Global Solutions Mobile Access is powered by award winning Seos® technology from ASSA ABLOY, learn more on our web site. https://apps.apple.com/us/app/hospitality-mobile-access/id1017290566?platform=iphone

Claim 15



Unique User Experience

Mobile Access offers guests a whole new hotel experience. Depending on the solution deployed they can reserve and book their room using their mobile phone or device. They can then use the phone to check in and check out.

<https://www.assaabloyglobalsolutions.com/en/hospitality-solutions>

Claim 15

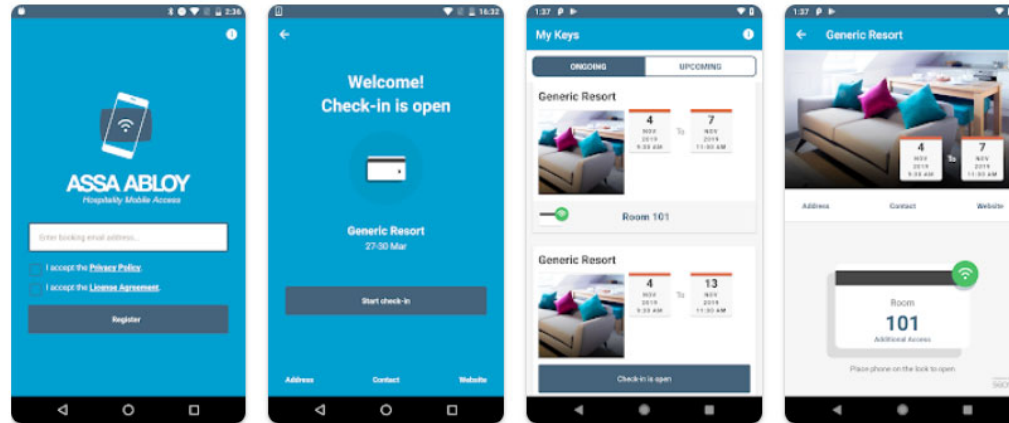
How It Works?

- 1 Download the application.
- 2 Make the reservation.
- 3 Check into the room.
- 4 Bypass frontdesk upon arrival and go to the room.
- 5 Open door with the use of mobile application / mobile key.

<https://www.assaabloyglobalsolutions.com/en/hospitality-solutions>

Claim 15	
a server to provide a communication setting to the application, the communication setting corresponding to the access device, and to further provide, via a first communication protocol, a reservation certificate to the application, the reservation certificate comprising an interval of a reservation,	ASSA's access control system comprises a server to provide a communication setting to the application, the communication setting corresponding to the access device, and to further provide, via a first communication protocol, a reservation certificate to the application, the reservation certificate comprising an interval of a reservation. https://www.assaabloy.com/tr/en/stories/blog/assa-abloy-mobile-access-technology; <i>see also</i> https://www.assaabloyglobalsolutions.com/en/hospitality-solutions/mobile-access-for-hospitality/rfid-upgrade. ASSA's system includes a server to send a communication setting to the ASSA Mobile App, including the Bluetooth communication setting with which the ASSA Mobile App communicates with the access device. The server further provides a reservation certificate to the ASSA Mobile App. The reservation certificate comprises an interval of a reservation, such as the check-in date/time and the check-out date/time.

Claim 15



About this app →

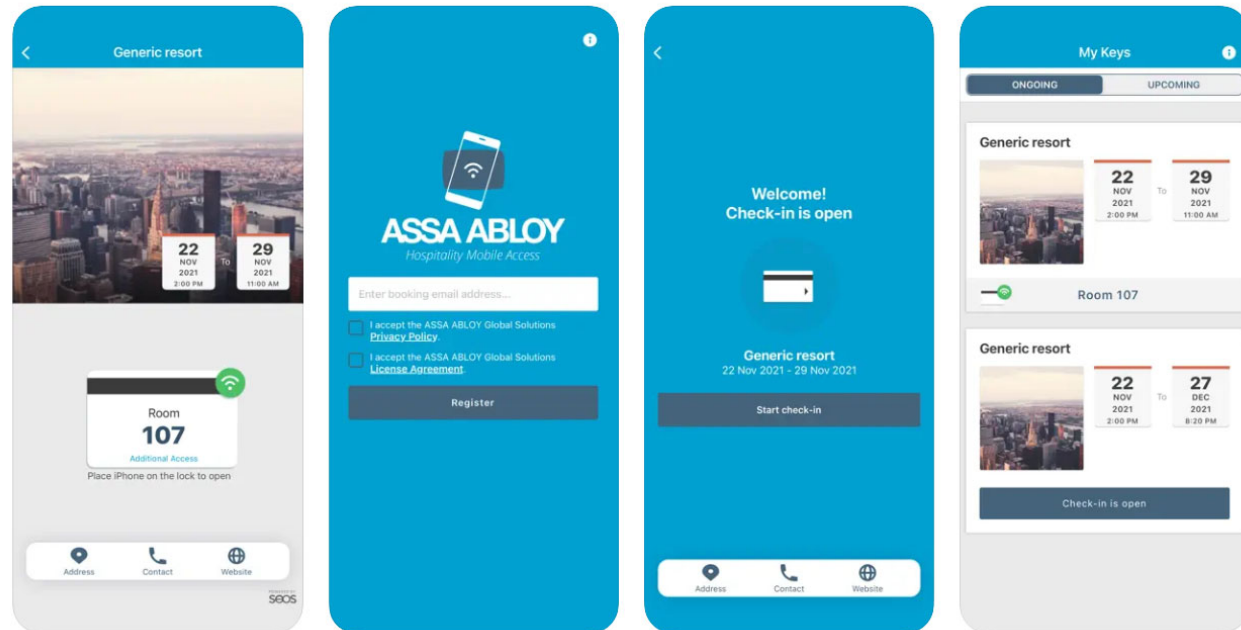
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ASSA ABLOY Hospitality Mobile Access is available at select hotels around the world.

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https://play.google.com/store/apps/details?id=com.assaabloy.hospitality.mobileaccess.hospitalitymobileaccess&hl=en_US&gl=US

Claim 15

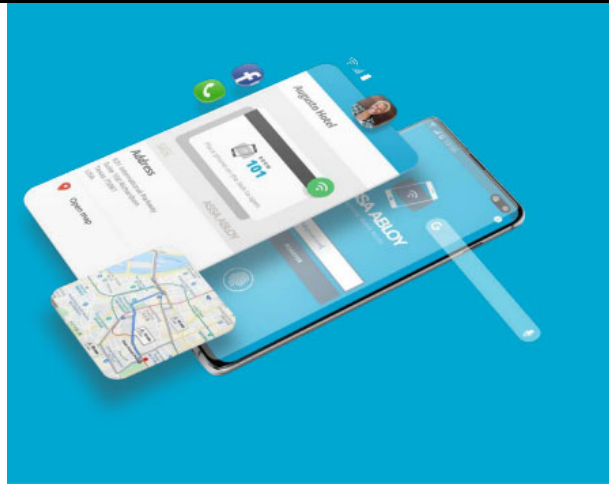
Screenshots iPad iPhone



<https://apps.apple.com/us/app/hospitality-mobile-access/id1017290566?platform=iphone>

Claim 15	
	Open your hotel room with your iPhone! With ASSA ABLOY Global Solutions Mobile Access you can check in to your hotel room before you arrive and receive your room key direct to your phone. When you arrive at the hotel, go straight to your room and open the door by holding your phone up against the lock. Your hotel key is securely delivered and stored inside your device and you don't need to worry about a keycard. ASSA ABLOY Global Solutions Mobile Access is available at selected hotels around the world. About our Mobile Access solution: The Mobile Access solution from ASSA ABLOY Global Solutions makes VingCard RFID locks operable with mobile devices through BLE (Bluetooth Low Energy) technology. The solution platform includes highly reliable and secure mobile key management and Trusted Service Manager (TSM) services. ASSA ABLOY Global Solutions Mobile Access is powered by award winning Seos® technology from ASSA ABLOY, learn more on our web site. https://apps.apple.com/us/app/hospitality-mobile-access/id1017290566?platform=iphone

Claim 15



Unique User Experience

Mobile Access offers guests a whole new hotel experience. Depending on the solution deployed they can reserve and book their room using their mobile phone or device. They can then use the phone to check in and check out.

<https://www.assaabloyglobalsolutions.com/en/hospitality-solutions>

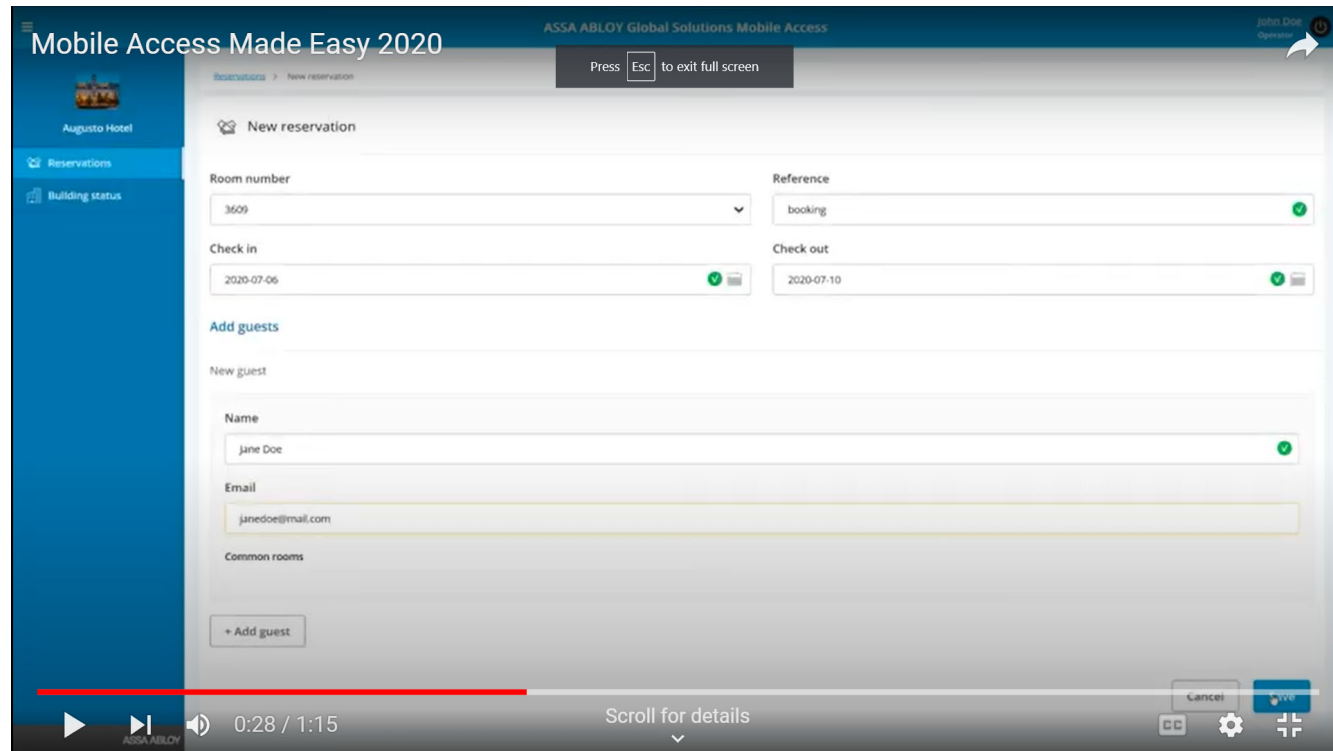
Claim 15

How It Works?

- 1 Download the application.
- 2 Make the reservation.
- 3 Check into the room.
- 4 Bypass frontdesk upon arrival and go to the room.
- 5 Open door with the use of mobile application / mobile key.

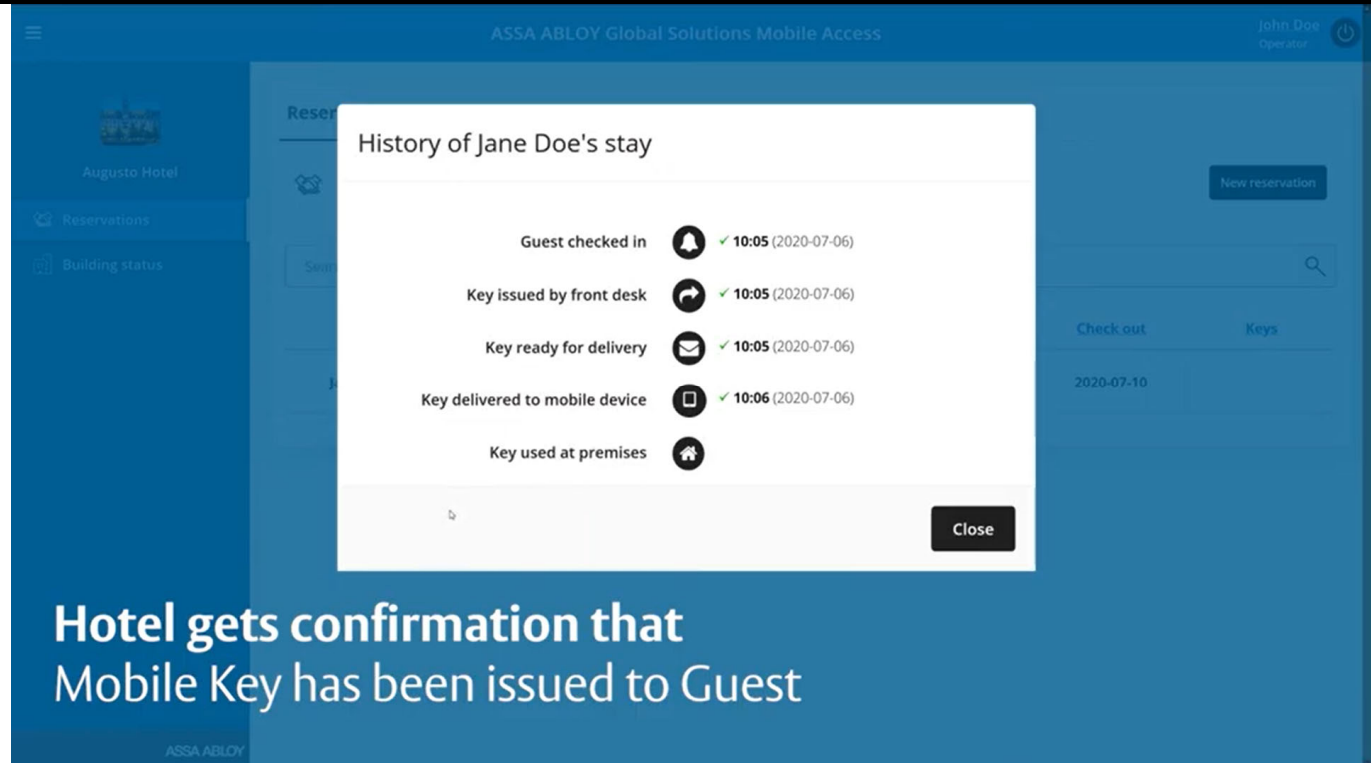
<https://www.assaabloyglobalsolutions.com/en/hospitality-solutions>

Claim 15



<https://youtu.be/YYvYMml-rj8>

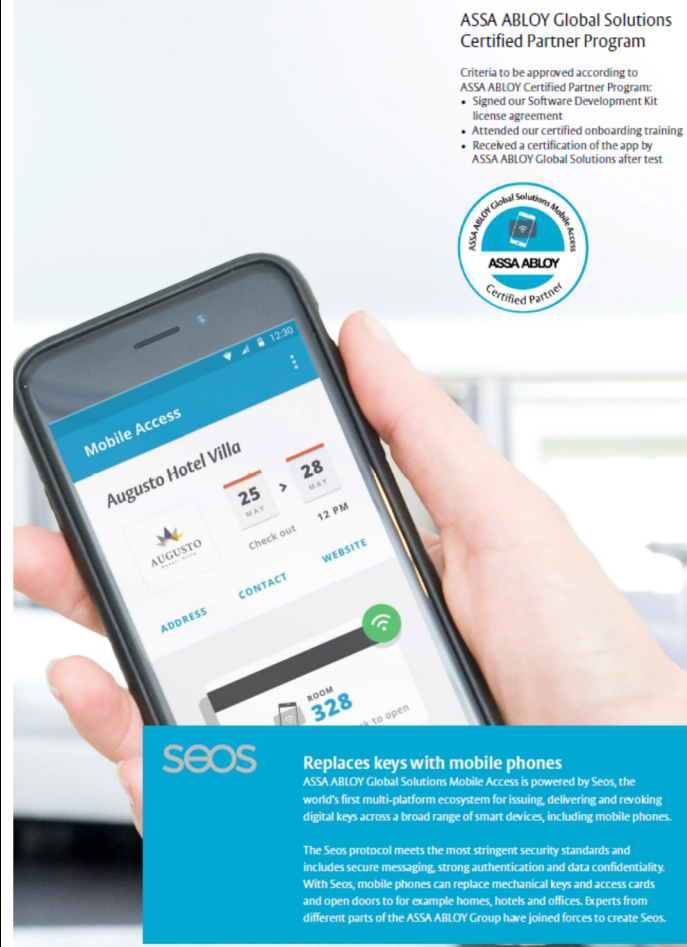
Claim 15



<https://youtu.be/YYvYMml-rj8>

Claim 15	
	 ASSA ABLOY Global Solutions Mobile Access App This is our own ready-to-use, off-the-shelf solution. The app suits hotels that want to provide basic mobile access solutions to their guests in a simple to use format. There are no integrations or third-party dependencies required. We publish a general app that is available in the App Store and on Google Play. Through an administration portal, hotels can customize their digital key graphics to reflect company branding or design. This will then show in a "Passbook" inspired style for the hotel to use.  Customer Integration This solution is created for hotels with their own app initiatives that want to integrate mobile access into their own apps and back end systems. <u>ASSA ABLOY Global Solutions provides a Mobile Access Software Development kit (SDK) together with dedicated onboarding services to facilitate seamless integration.</u>  Third Party Certified Partner App This solution suits hotels that want mobile app functionality beyond just access control, but don't yet have their own in-house app initiatives. <u>They can here pick a solution from one of our selected app specialist partners, who through our Certified Partner Program already have integrated our mobile access functionality into their products.</u> Mobile Access Brochure, p. 4.

Claim 15



**ASSA ABLOY Global Solutions
Certified Partner Program**

Criteria to be approved according to
ASSA ABLOY Certified Partner Program:

- Signed our Software Development Kit license agreement
- Attended our certified onboarding training
- Received a certification of the app by ASSA ABLOY Global Solutions after test

seos

Replaces keys with mobile phones

ASSA ABLOY Global Solutions Mobile Access is powered by Seos, the world's first multi-platform ecosystem for issuing, delivering and revoking digital keys across a broad range of smart devices, including mobile phones.

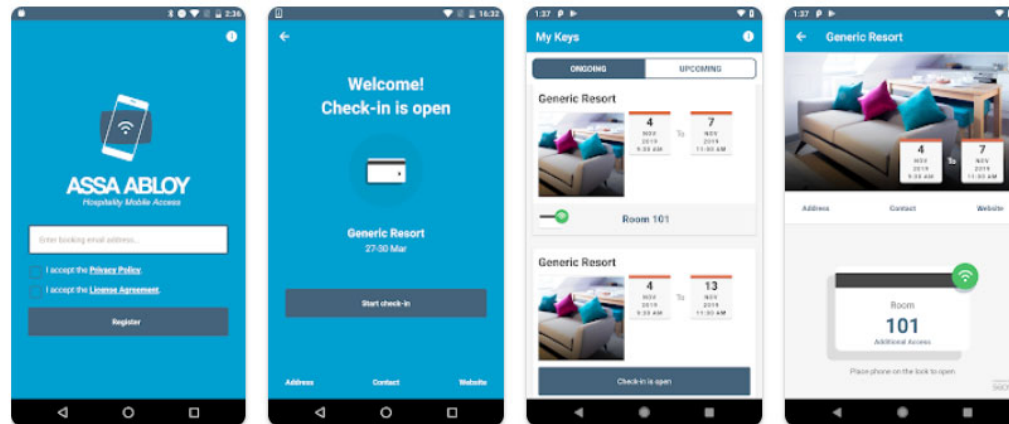
The Seos protocol meets the most stringent security standards and includes secure messaging, strong authentication and data confidentiality. With Seos, mobile phones can replace mechanical keys and access cards and open doors to for example homes, hotels and offices. Experts from different parts of the ASSA ABLOY Group have joined forces to create Seos.

Mobile Access Brochure, p. 5.

Claim 15

wherein the application compares the interval of the reservation to a current time accessible to the application to determine if the reservation certificate is current and wherein the application activates the door lock by communicating with the access device via a second communication protocol that is different from the first communication protocol, based on use by the application of the communication setting, when the application determines that the reservation certificate is current.

ASSA's access control system includes the foregoing application, wherein the application compares the interval of the reservation to a current time accessible to the application to determine if the reservation certificate is current and wherein the application activates the door lock by communicating with the access device via a second communication protocol that is different from the first communication protocol, based on use by the application of the communication setting, when the application determines that the reservation certificate is current.



About this app →

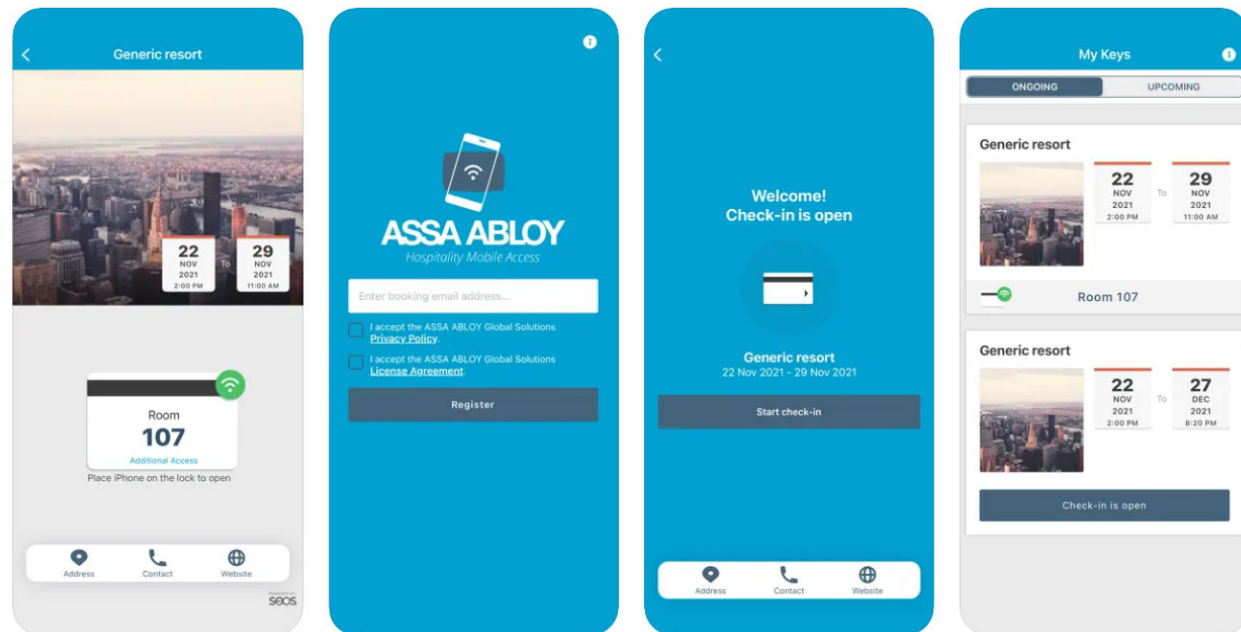
With ASSA ABLOY Hospitality Mobile Access you can check in to your hotel room before you arrive and receive your room key direct to your phone. When you arrive at the hotel, go straight to your room and open the door by holding your phone up against the lock. Your hotel key is securely delivered and stored inside your device and you don't need to worry about a keycard.

ASSA ABLOY Hospitality Mobile Access is available at select hotels around the world.

Claim 15

https://play.google.com/store/apps/details?id=com.assaabloyn.hospitality.mobileaccess.hospitalitymobileaccess&hl=en_US&gl=US

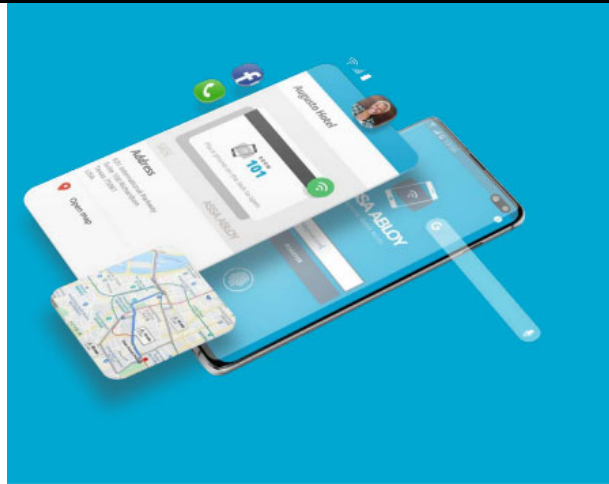
Screenshots iPad iPhone



<https://apps.apple.com/us/app/hospitality-mobile-access/id1017290566?platform=iphone>

Claim 15	
	Open your hotel room with your iPhone! With ASSA ABLOY Global Solutions Mobile Access you can check in to your hotel room before you arrive and receive your room key direct to your phone. When you arrive at the hotel, go straight to your room and open the door by holding your phone up against the lock. Your hotel key is securely delivered and stored inside your device and you don't need to worry about a keycard. ASSA ABLOY Global Solutions Mobile Access is available at selected hotels around the world. About our Mobile Access solution: The Mobile Access solution from ASSA ABLOY Global Solutions makes VingCard RFID locks operable with mobile devices through BLE (Bluetooth Low Energy) technology. The solution platform includes highly reliable and secure mobile key management and Trusted Service Manager (TSM) services. ASSA ABLOY Global Solutions Mobile Access is powered by award winning Seos® technology from ASSA ABLOY, learn more on our web site. https://apps.apple.com/us/app/hospitality-mobile-access/id1017290566?platform=iphone

Claim 15



Unique User Experience

Mobile Access offers guests a whole new hotel experience. Depending on the solution deployed they can reserve and book their room using their mobile phone or device. They can then use the phone to check in and check out.

<https://www.assaabloyglobalsolutions.com/en/hospitality-solutions>

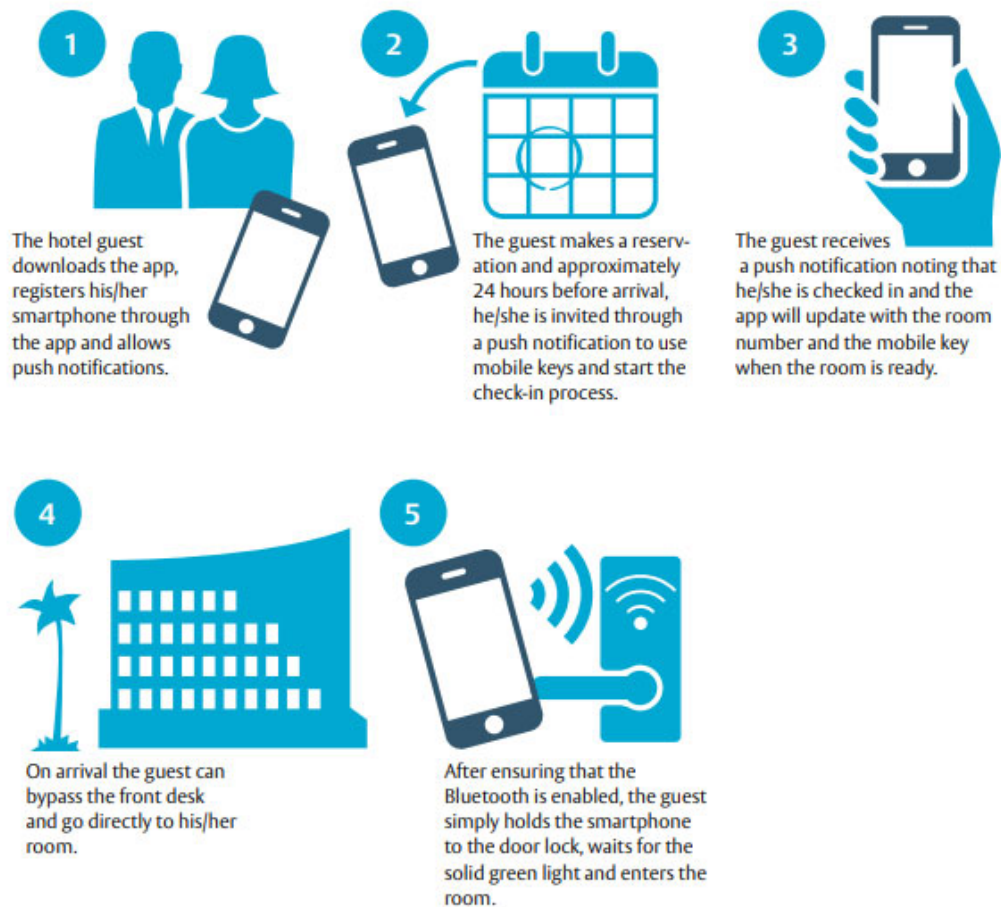
Claim 15

How It Works?

- 1 Download the application.
- 2 Make the reservation.
- 3 Check into the room.
- 4 Bypass frontdesk upon arrival and go to the room.
- 5 Open door with the use of mobile application / mobile key.

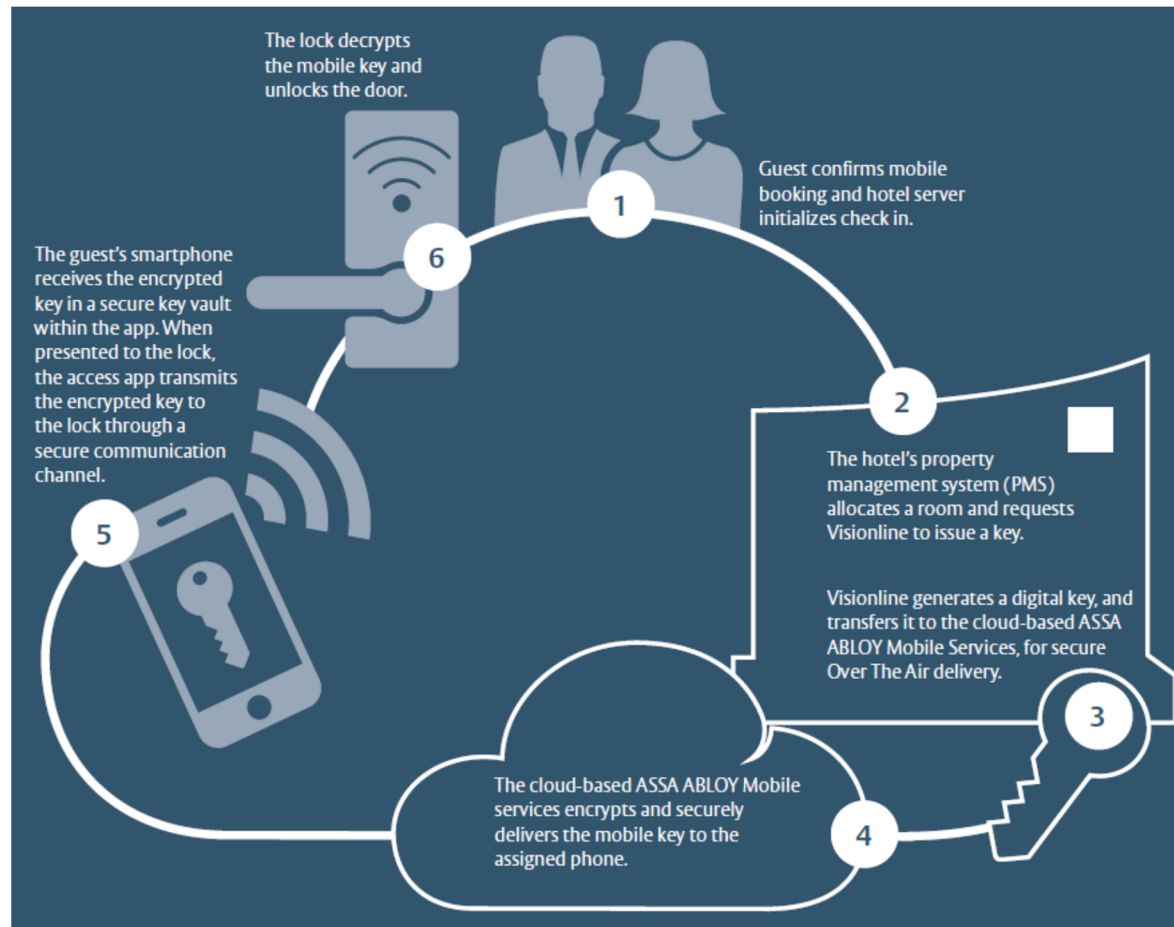
<https://www.assaabloyglobalsolutions.com/en/hospitality-solutions>

Claim 15



<https://www.assaabloyglobalsolutions.com/en/hospitality-solutions>

Claim 15

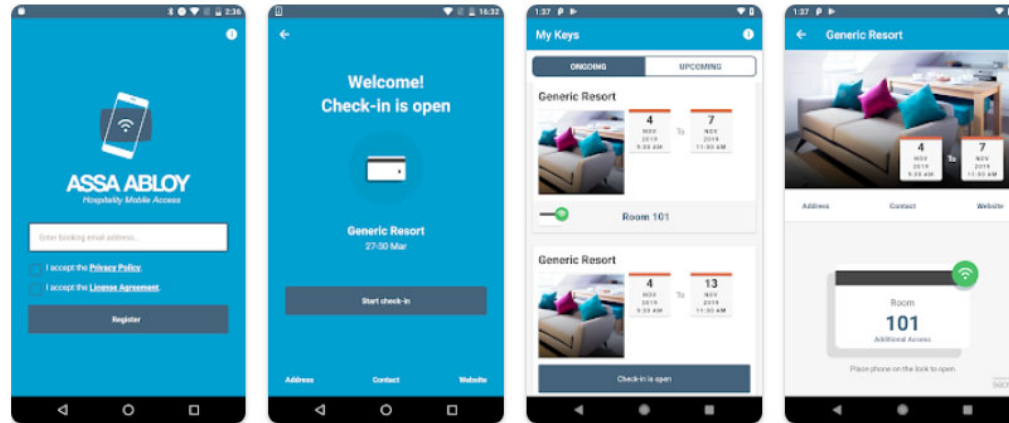


Mobile Access Brochure, p. 9.

Claim 15	
	HOW IT WORKS - PROPERTY PERSPECTIVE  The diagram illustrates a five-step process for mobile access from a property perspective. Each step is represented by an icon and a numbered description in a grey box: Step 1: Property receives reservation confirmation from guest. Icon: A computer monitor displaying a calendar with the number 24. Step 2: Notify guest of registration options. Icon: A computer monitor displaying a calendar grid next to silhouettes of a man and a woman. Step 3: Assign guest room. Icon: A computer monitor displaying 'AVAILABLE ROOMS' with options 101, 102, and 103, next to a smartphone displaying room 101. Step 4: Send guest digital key. Icon: A computer monitor displaying a key icon next to a smartphone displaying a key icon. Step 5: Key is automatically cancelled upon guest checkout. Icon: A computer monitor displaying a clock icon next to a smartphone displaying a key icon with a red 'X' over it. https://www.assaabloyglobalsolutions.com/downloads/product-sheets/mobile-access/Mobile-Access-App-Product-Sheet-EN.pdf

Claim 16	
16. The access control system of claim 15, wherein the first communication protocol comprises a cellular protocol.	ASSA's system includes, uses (and ASSA instructs end users to use), and/or practices each element of Claim 15 and wherein the first communication protocol comprises a cellular protocol. HOW IT WORKS - PROPERTY PERSPECTIVE  The diagram illustrates the five steps of the mobile access system from a property perspective: 1 Property receives reservation confirmation from guest: A computer monitor displays a calendar with the number 24, and a wireless signal icon is shown above it. 2 Notify guest of registration options: A computer monitor displays a registration grid, and a wireless signal icon is shown above it, with a man and a woman standing next to it. 3 Assign guest room: A computer monitor displays 'AVAILABLE ROOMS' with options 101, 102, and 103, and a wireless signal icon is shown above it, with a smartphone displaying '101' next to it. 4 Send guest digital key: A computer monitor displays a key icon, and a wireless signal icon is shown above it, with a smartphone displaying a key icon next to it. 5 Key is automatically cancelled upon guest checkout: A computer monitor displays a clock icon, and a wireless signal icon is shown above it, with a smartphone displaying a key icon with a red 'X' over it next to it. https://www.assaabloyglobalsolutions.com/downloads/product-sheets/mobile-access/Mobile-Access-App-Product-Sheet-EN.pdf

Claim 16



About this app →

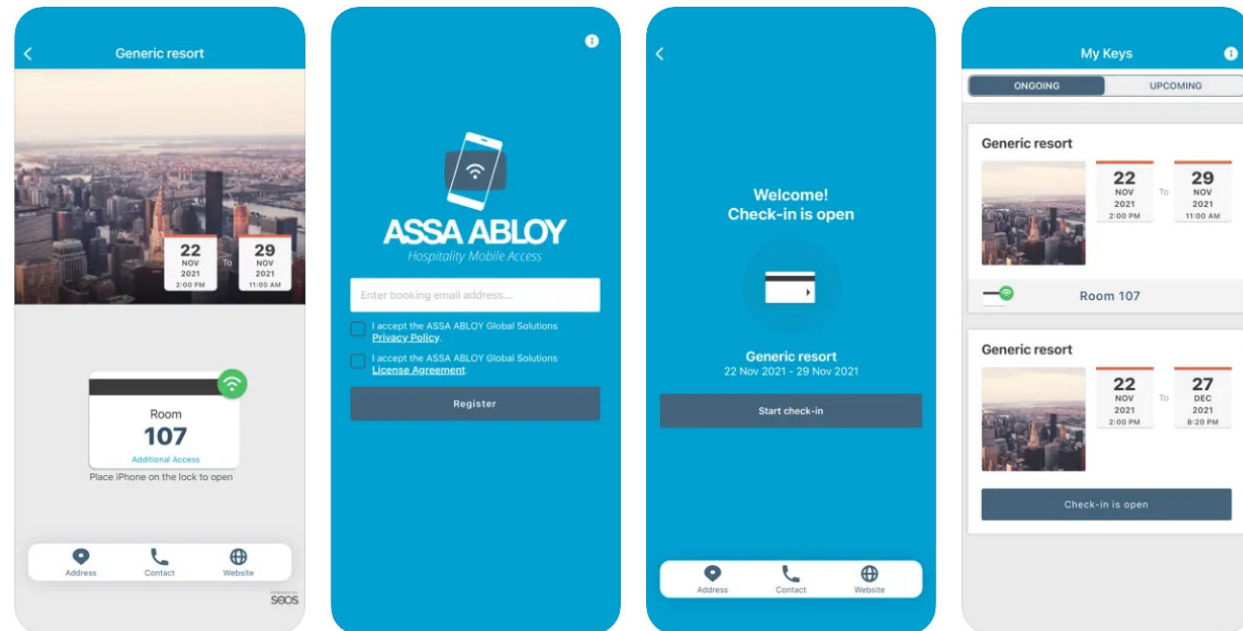
With ASSA ABLOY Hospitality Mobile Access you can check in to your hotel room before you arrive and receive your room key direct to your phone. When you arrive at the hotel, go straight to your room and open the door by holding your phone up against the lock. Your hotel key is securely delivered and stored inside your device and you don't need to worry about a keycard.

ASSA ABLOY Hospitality Mobile Access is available at select hotels around the world.

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https://play.google.com/store/apps/details?id=com.assaabloy.hospitality.mobileaccess.hospitalitymobileaccess&hl=en_US&gl=US

Claim 16

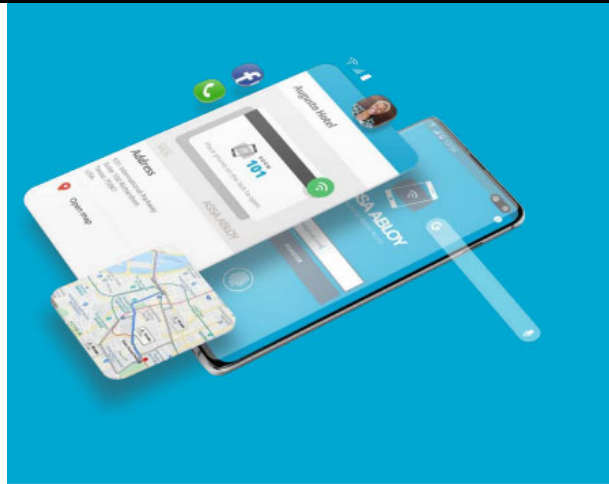
Screenshots iPad iPhone



<https://apps.apple.com/us/app/hospitality-mobile-access/id1017290566?platform=iphone>

Claim 16	
	Open your hotel room with your iPhone! With ASSA ABLOY Global Solutions Mobile Access you can check in to your hotel room before you arrive and receive your room key direct to your phone. When you arrive at the hotel, go straight to your room and open the door by holding your phone up against the lock. Your hotel key is securely delivered and stored inside your device and you don't need to worry about a keycard. ASSA ABLOY Global Solutions Mobile Access is available at selected hotels around the world. About our Mobile Access solution: The Mobile Access solution from ASSA ABLOY Global Solutions makes VingCard RFID locks operable with mobile devices through BLE (Bluetooth Low Energy) technology. The solution platform includes highly reliable and secure mobile key management and Trusted Service Manager (TSM) services. ASSA ABLOY Global Solutions Mobile Access is powered by award winning Seos® technology from ASSA ABLOY, learn more on our web site. https://apps.apple.com/us/app/hospitality-mobile-access/id1017290566?platform=iphone

Claim 16



Unique User Experience

Mobile Access offers guests a whole new hotel experience. Depending on the solution deployed they can reserve and book their room using their mobile phone or device. They can then use the phone to check in and check out.

<https://www.assaabloyglobalsolutions.com/en/hospitality-solutions>

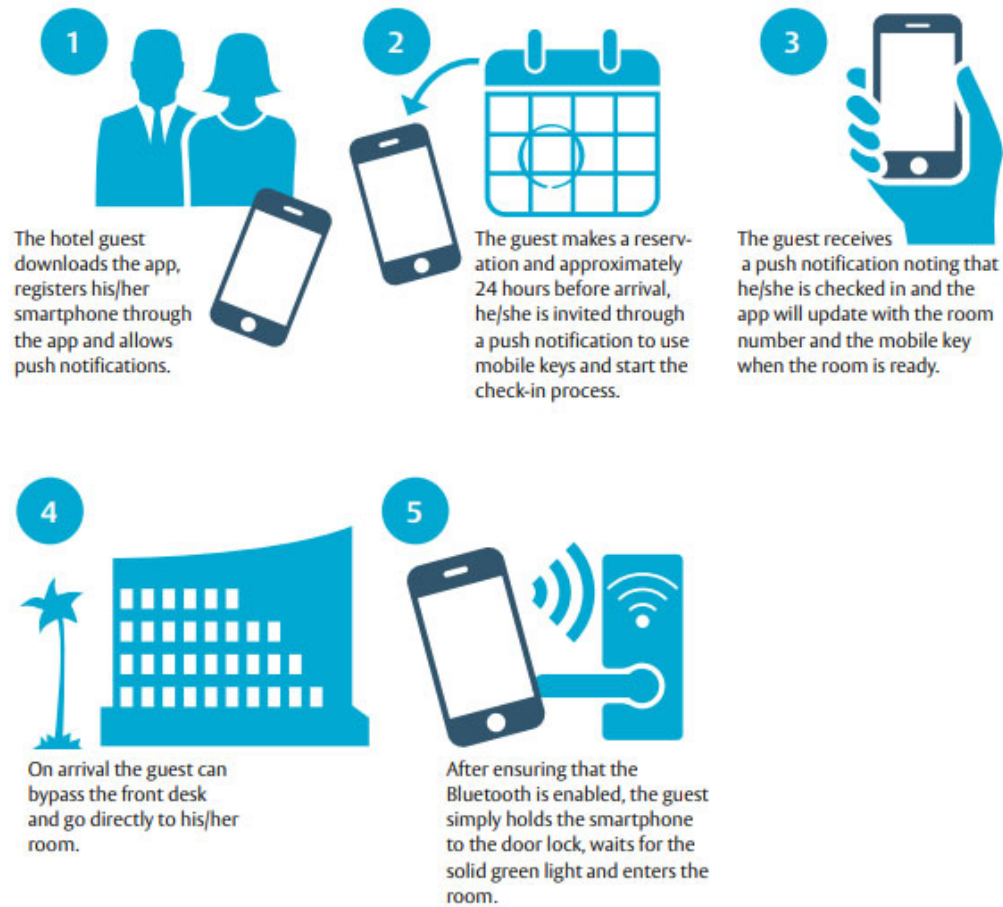
Claim 16

How It Works?

- 1 Download the application.
- 2 Make the reservation.
- 3 Check into the room.
- 4 Bypass frontdesk upon arrival and go to the room.
- 5 Open door with the use of mobile application / mobile key.

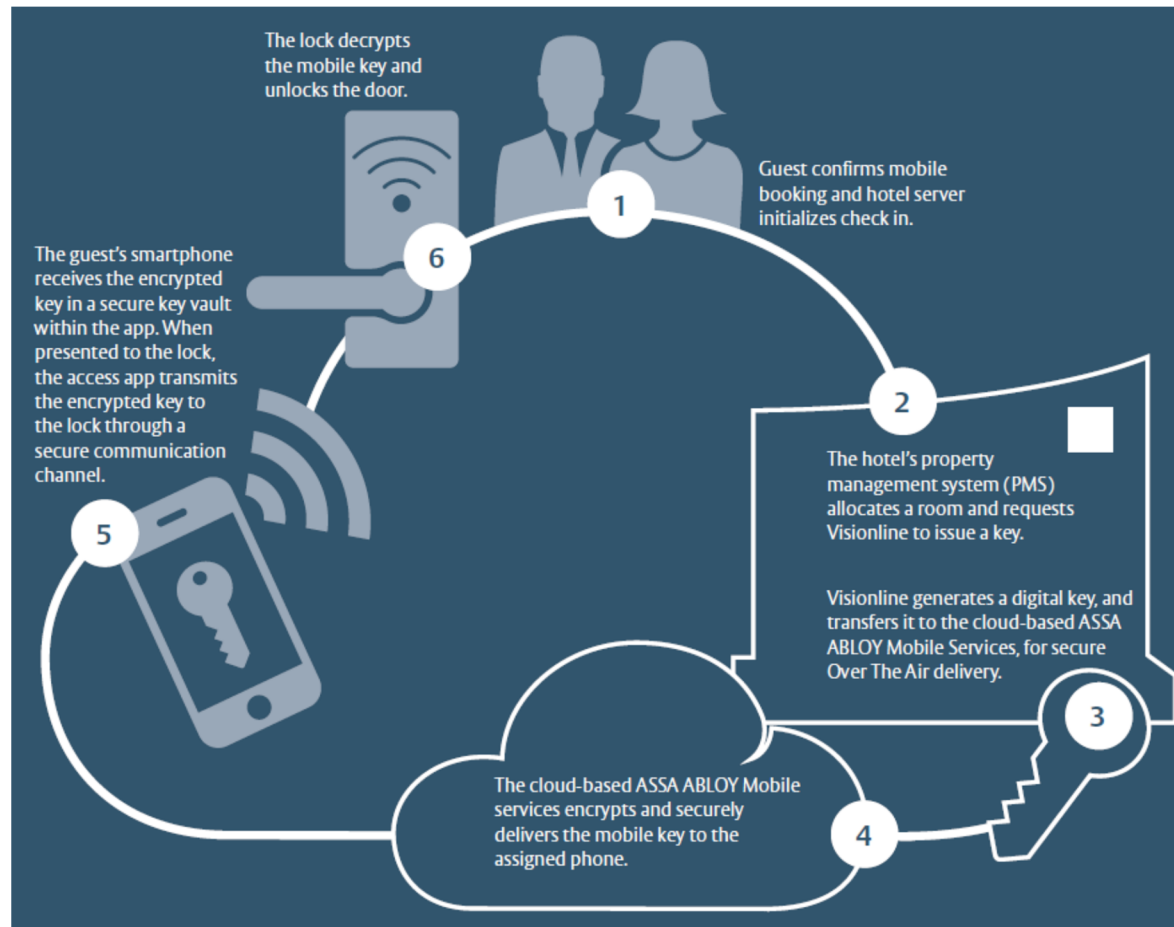
<https://www.assaabloyglobalsolutions.com/en/hospitality-solutions>

Claim 16



<https://www.assaabloyglobalsolutions.com/en/hospitality-solutions>

Claim 16

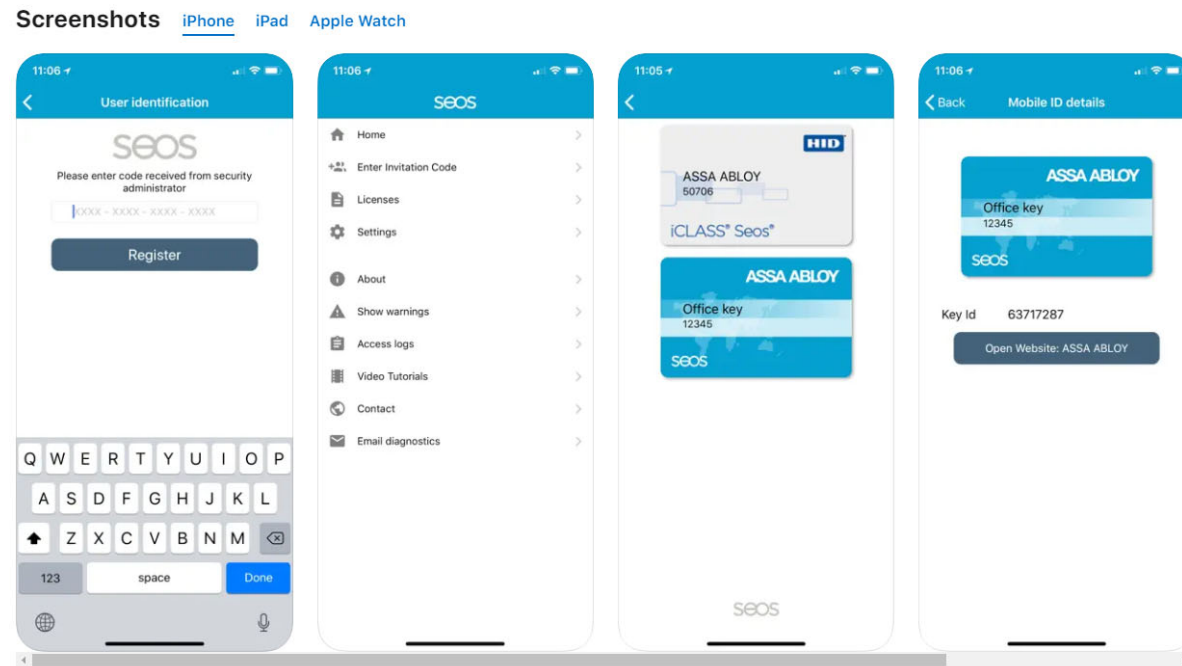


Mobile Access Brochure, p. 9

Claim 17

17. The access control system of claim 15, wherein the first communication protocol comprises a wireless LAN protocol.

ASSA's system includes, uses (and ASSA instructs end users to use), and/or practices each element of Claim 15 and wherein the second communication protocol comprises a wireless LAN protocol.



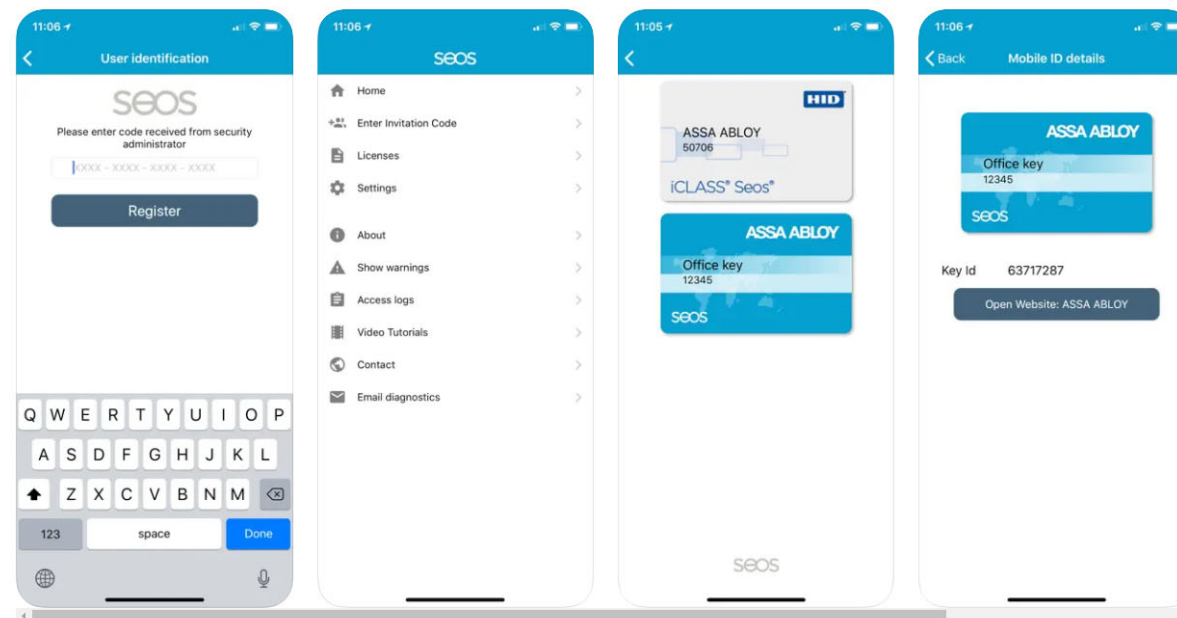
<https://apps.apple.com/us/app/assa-abloy-mobile-access/id793869814>

Claim 18

18. The access control system of claim 17, wherein the wireless LAN protocol comprises Wi-Fi.

ASSA's system includes, uses (and ASSA instructs end users to use), and/or practices each element of Claim 17 and wherein the wireless LAN protocol comprises Wi-Fi.

Screenshots [iPhone](#) [iPad](#) [Apple Watch](#)

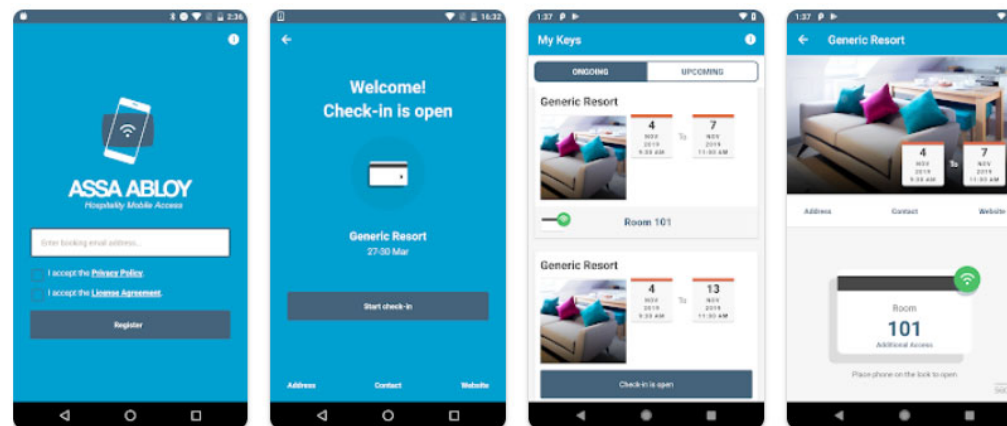


<https://apps.apple.com/us/app/assa-abloy-mobile-access/id793869814>

Claim 19

19. The access control system of claim 15, wherein the second communication protocol comprises a short-range wireless protocol.

ASSA's system includes, uses (and ASSA instructs end users to use), and/or practices each element of Claim 15 and wherein the second communication protocol comprises a short-range wireless protocol.



About this app →

With ASSA ABLOY Hospitality Mobile Access you can check in to your hotel room before you arrive and receive your room key direct to your phone. When you arrive at the hotel, go straight to your room and open the door by holding your phone up against the lock. Your hotel key is securely delivered and stored inside your device and you don't need to worry about a keycard.

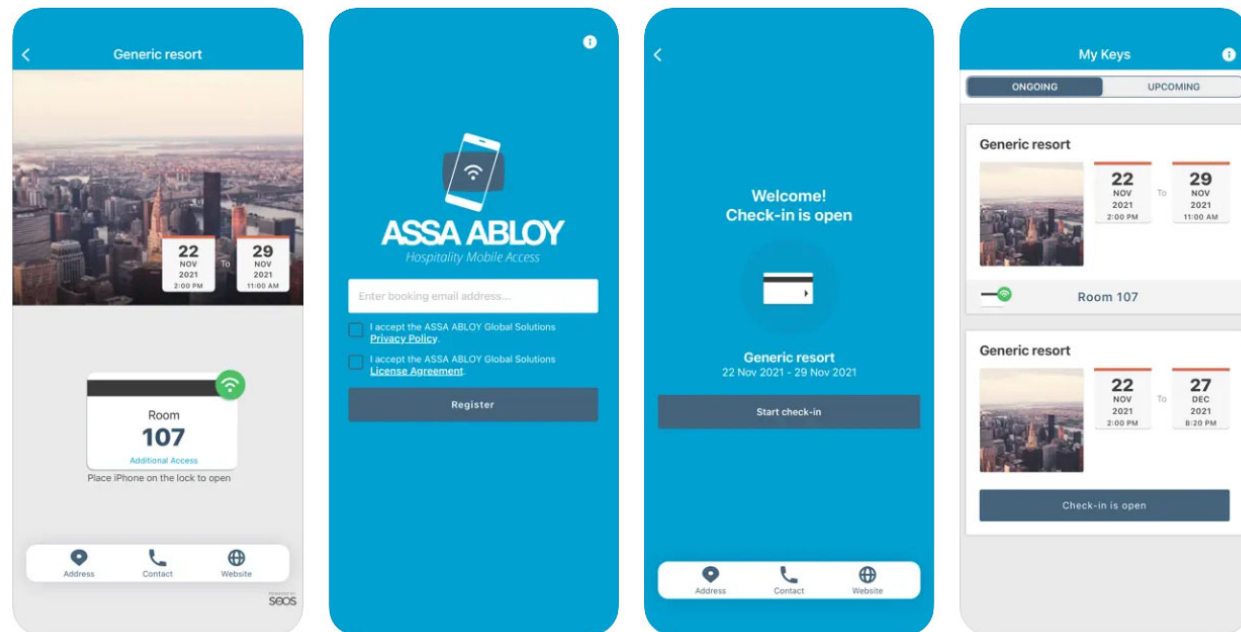
ASSA ABLOY Hospitality Mobile Access is available at select hotels around the world.

...

Claim 19

https://play.google.com/store/apps/details?id=com.assaabloyn.hospitality.mobileaccess.hospitalitymobileaccess&hl=en_US&gl=US

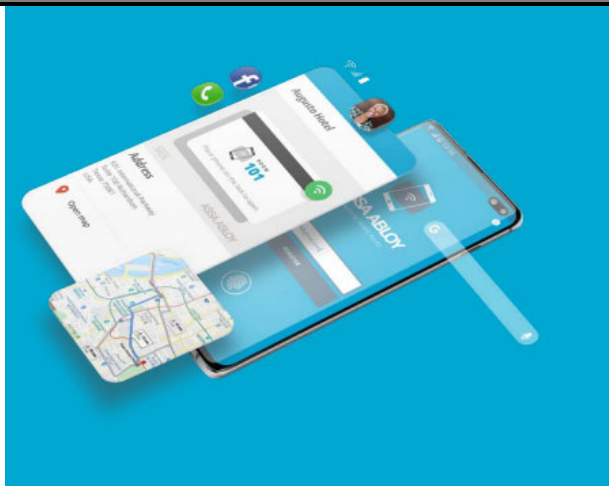
Screenshots iPad iPhone



<https://apps.apple.com/us/app/hospitality-mobile-access/id1017290566?platform=iphone>

Claim 19	
	Open your hotel room with your iPhone! With ASSA ABLOY Global Solutions Mobile Access you can check in to your hotel room before you arrive and receive your room key direct to your phone. When you arrive at the hotel, go straight to your room and open the door by holding your phone up against the lock. Your hotel key is securely delivered and stored inside your device and you don't need to worry about a keycard. ASSA ABLOY Global Solutions Mobile Access is available at selected hotels around the world. About our Mobile Access solution: The Mobile Access solution from ASSA ABLOY Global Solutions makes VingCard RFID locks operable with mobile devices through BLE (Bluetooth Low Energy) technology. The solution platform includes highly reliable and secure mobile key management and Trusted Service Manager (TSM) services. ASSA ABLOY Global Solutions Mobile Access is powered by award winning Seos® technology from ASSA ABLOY, learn more on our web site. https://apps.apple.com/us/app/hospitality-mobile-access/id1017290566?platform=iphone

Claim 19



Unique User Experience

Mobile Access offers guests a whole new hotel experience. Depending on the solution deployed they can reserve and book their room using their mobile phone or device. They can then use the phone to check in and check out.

<https://www.assaabloyglobalsolutions.com/en/hospitality-solutions>

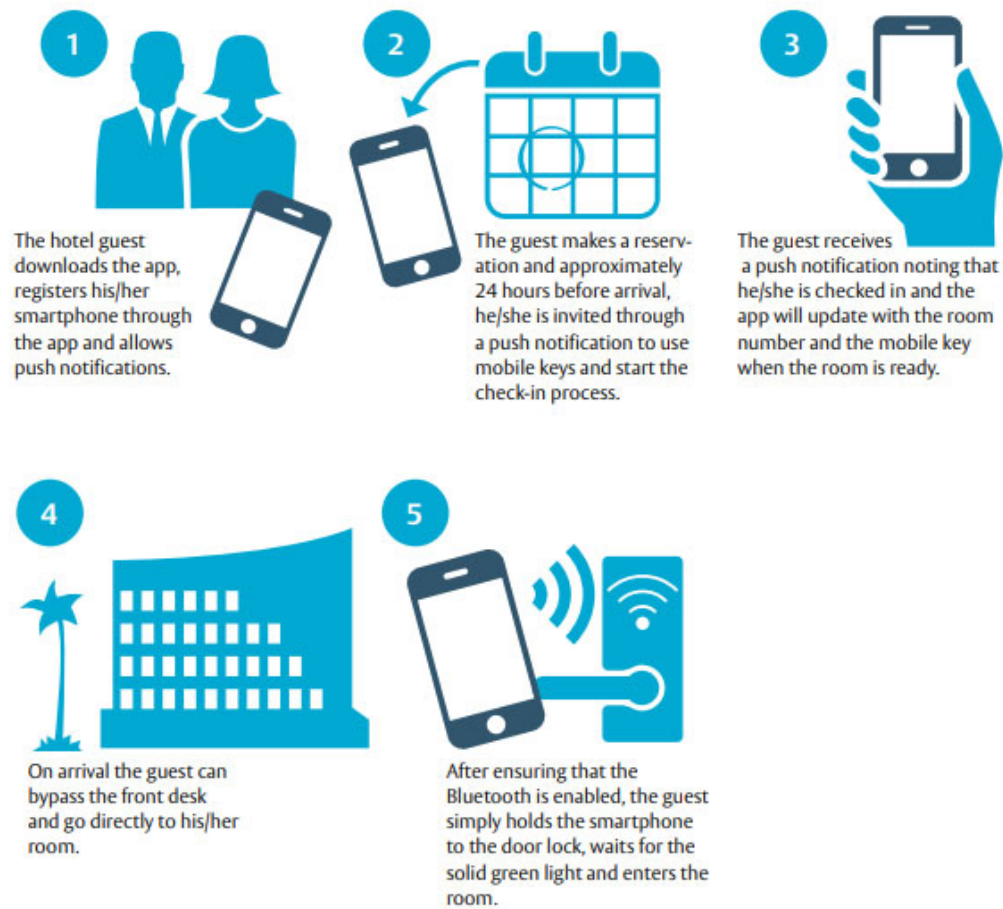
Claim 19

How It Works?

- 1 Download the application.
- 2 Make the reservation.
- 3 Check into the room.
- 4 Bypass frontdesk upon arrival and go to the room.
- 5 Open door with the use of mobile application / mobile key.

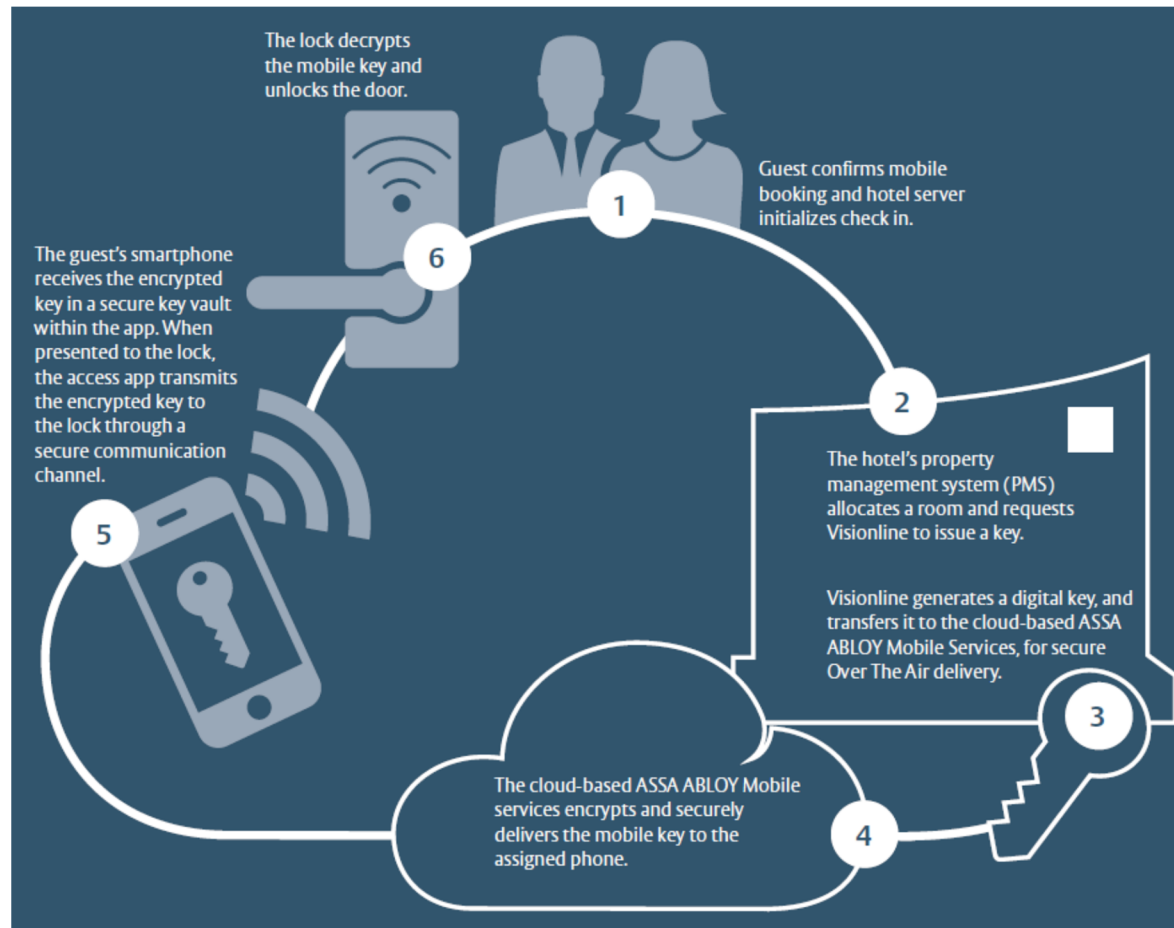
<https://www.assaabloyglobalsolutions.com/en/hospitality-solutions>

Claim 19



<https://www.assaabloyglobalsolutions.com/en/hospitality-solutions>

Claim 19

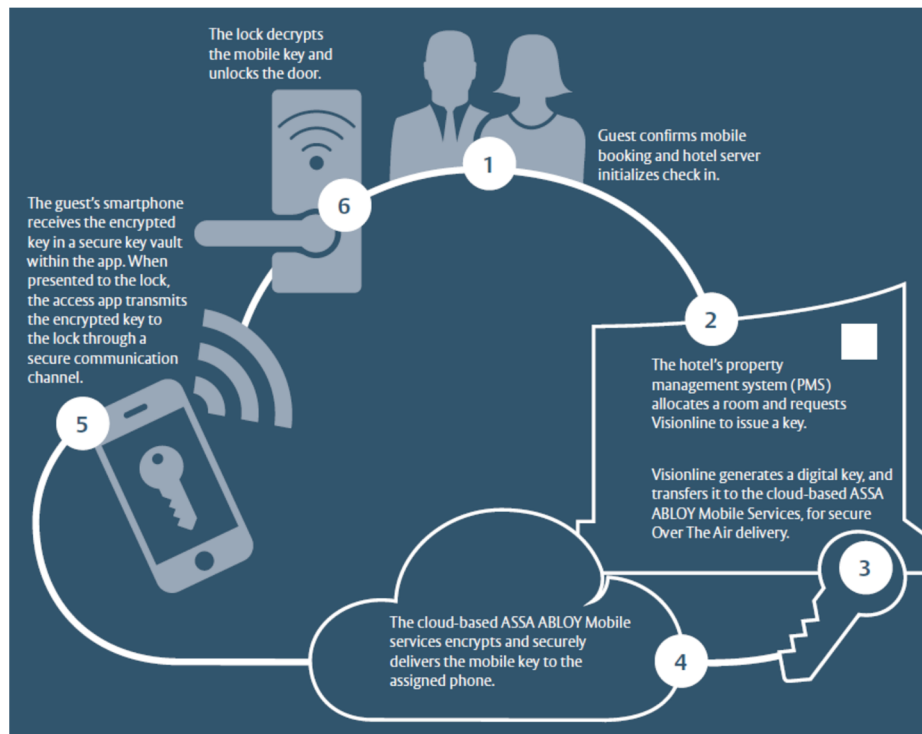


Mobile Access Brochure, p. 9

Claim 20

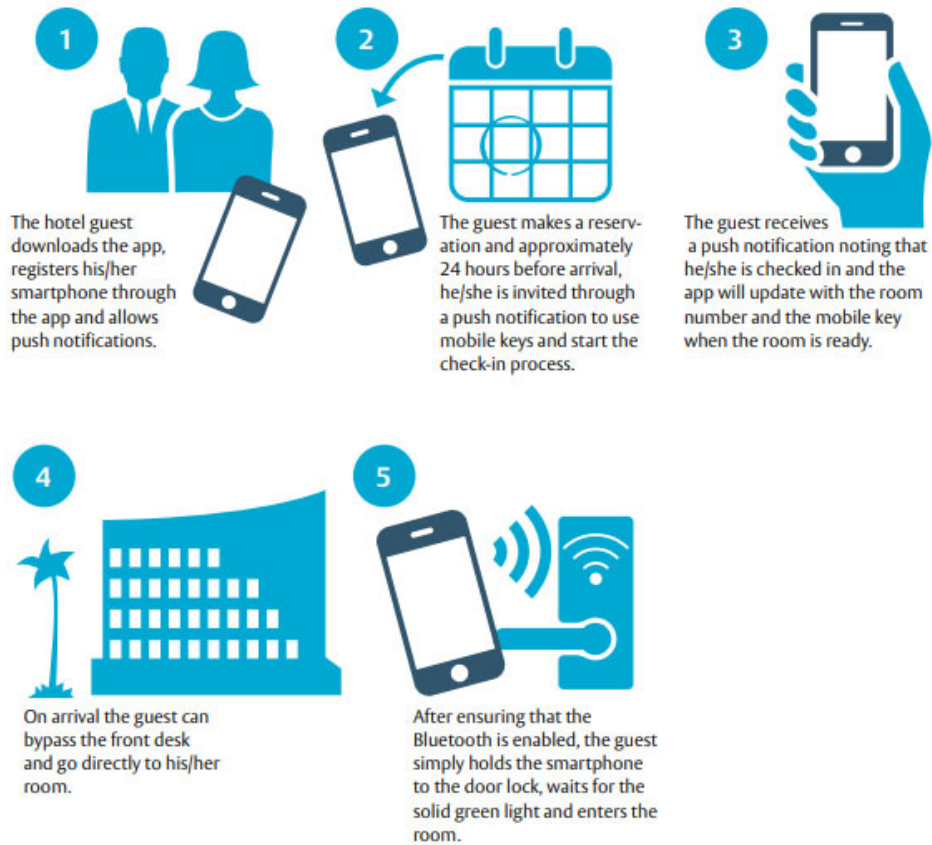
20. The access control system of claim 19, wherein the short-range wireless protocol comprises Bluetooth.

ASSA's system includes, uses (and ASSA instructs end users to use), and/or practices each element of Claim 19 and wherein the short-range wireless protocol comprises Bluetooth.



Mobile Access Brochure, p. 9.

Claim 20



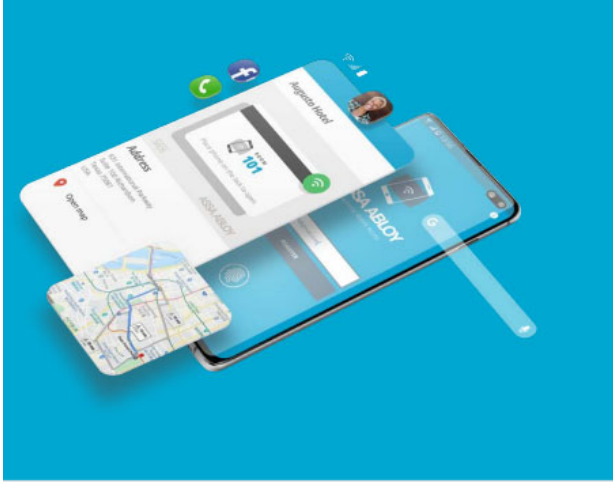
<https://www.assaabloyglobalsolutions.com/en/hospitality-solutions>

Claim 20	
	Step 3: Activate Mobile Access Without replacing existing hardware and with the addition of a Bluetooth Low Energy (BLE) reader, your property and guests can seamlessly begin to enjoy the contactless benefits of the technology. https://www.assaabloyglobalsolutions.com/en/hospitality-solutions/mobile-access-for-hospitality/rfid-upgrade

Claim 21	
21. The access control system of claim 15, wherein the second communication protocol comprises a wireless LAN protocol.	ASSA's system includes, uses (and ASSA instructs end users to use), and/or practices each element of Claim 15 and wherein the first communication protocol comprises a wireless LAN protocol. About this app → With ASSA ABLOY Hospitality Mobile Access you can check in to your hotel room before you arrive and receive your room key direct to your phone. When you arrive at the hotel, go straight to your room and open the door by holding your phone up against the lock. Your hotel key is securely delivered and stored inside your device and you don't need to worry about a keycard. ASSA ABLOY Hospitality Mobile Access is available at select hotels around the world.

Claim 21	
	https://play.google.com/store/apps/details?id=com.assaabloyn.hospitality.mobileaccess.hospitalitymobileaccess&hl=en_US&gl=US Screenshots iPad iPhone https://apps.apple.com/us/app/hospitality-mobile-access/id1017290566?platform=iphone

Claim 21	
	Open your hotel room with your iPhone! With ASSA ABLOY Global Solutions Mobile Access you can check in to your hotel room before you arrive and receive your room key direct to your phone. When you arrive at the hotel, go straight to your room and open the door by holding your phone up against the lock. Your hotel key is securely delivered and stored inside your device and you don't need to worry about a keycard. ASSA ABLOY Global Solutions Mobile Access is available at selected hotels around the world. About our Mobile Access solution: The Mobile Access solution from ASSA ABLOY Global Solutions makes VingCard RFID locks operable with mobile devices through BLE (Bluetooth Low Energy) technology. The solution platform includes highly reliable and secure mobile key management and Trusted Service Manager (TSM) services. ASSA ABLOY Global Solutions Mobile Access is powered by award winning Seos® technology from ASSA ABLOY, learn more on our web site. https://apps.apple.com/us/app/hospitality-mobile-access/id1017290566?platform=iphone

Claim 21	
	 Unique User Experience Mobile Access offers guests a whole new hotel experience. Depending on the solution deployed they can reserve and book their room using their mobile phone or device. They can then use the phone to check in and check out. https://www.assaabloyglobalsolutions.com/en/hospitality-solutions

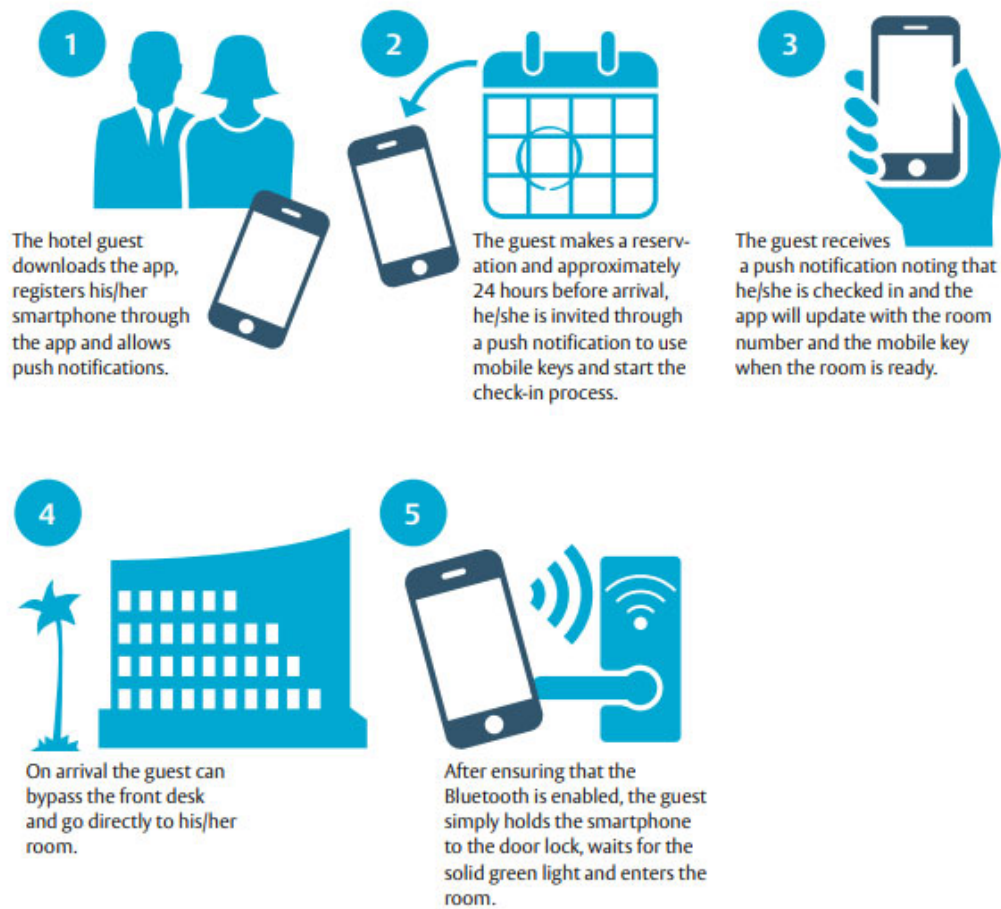
Claim 21

How It Works?

- 1 Download the application.
- 2 Make the reservation.
- 3 Check into the room.
- 4 Bypass frontdesk upon arrival and go to the room.
- 5 Open door with the use of mobile application / mobile key.

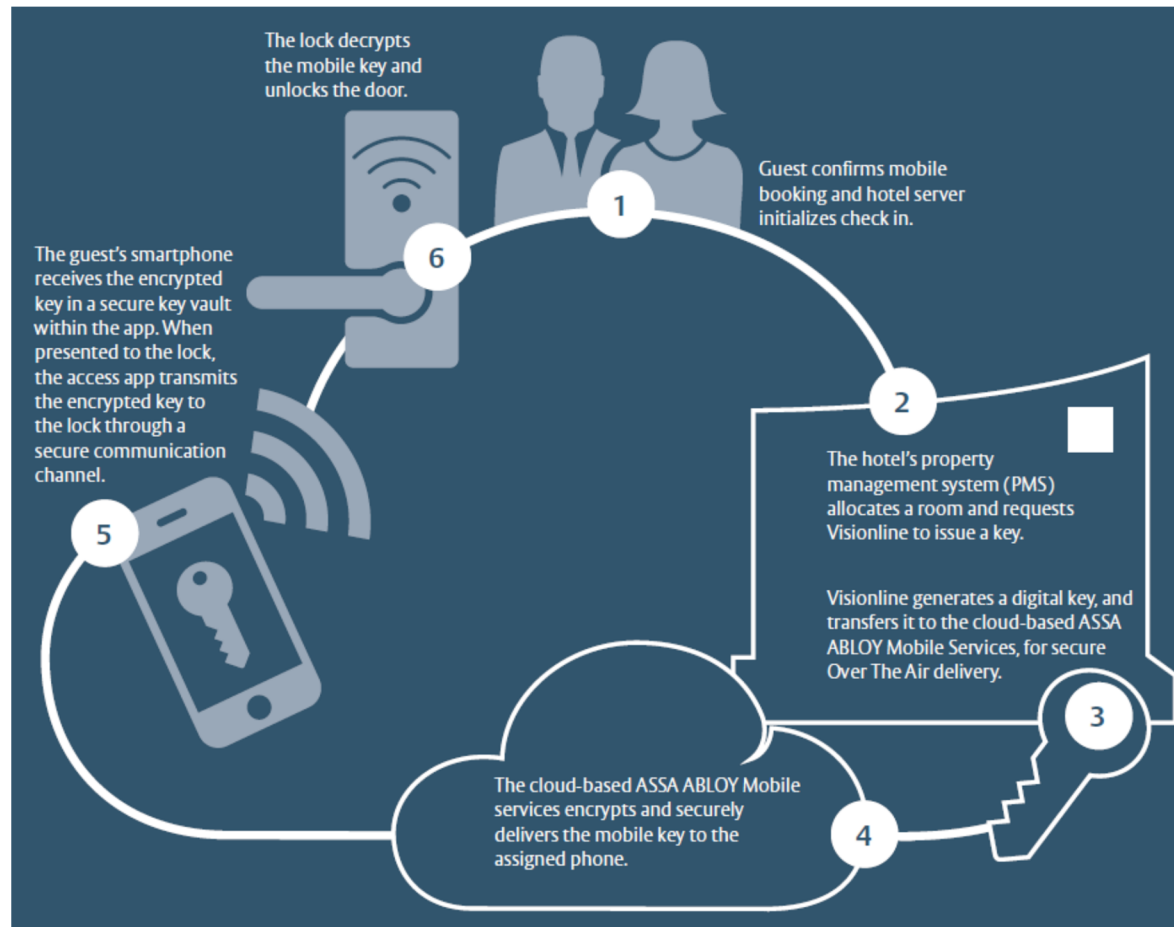
<https://www.assaabloyglobalsolutions.com/en/hospitality-solutions>

Claim 21



<https://www.assaabloyglobalsolutions.com/en/hospitality-solutions>

Claim 21

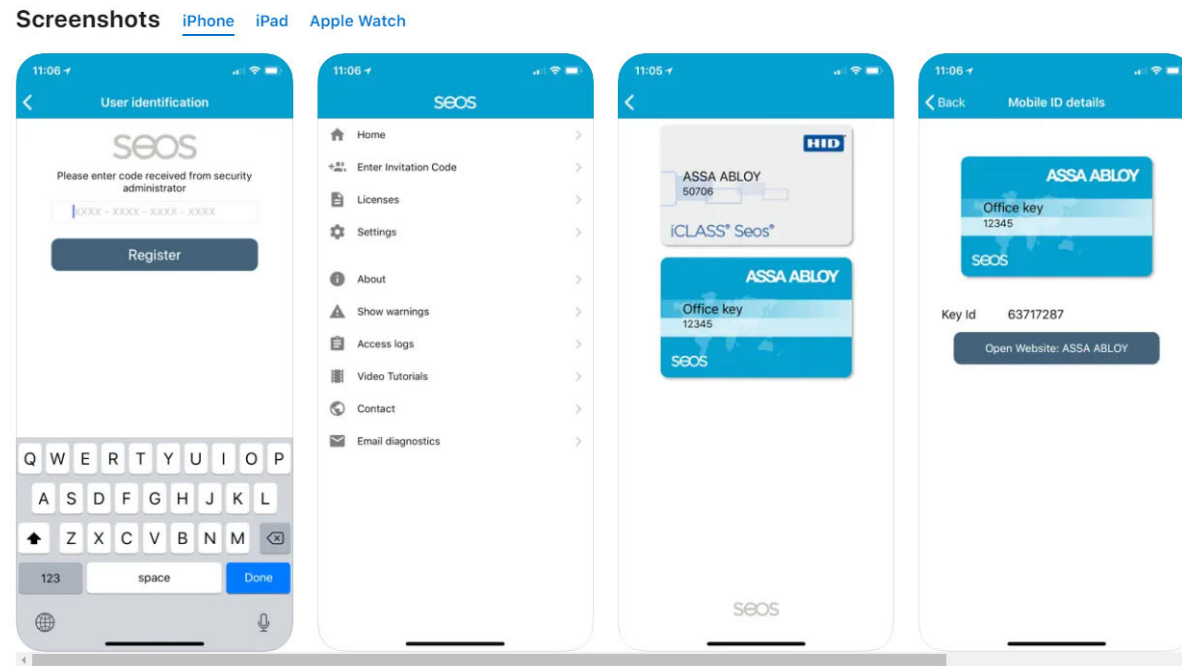


Mobile Access Brochure, p. 9.

Claim 22

22. The access control system of claim 21, wherein the wireless LAN protocol comprises Wi-Fi.

ASSA's system includes, uses (and ASSA instructs end users to use), and/or practices each element of Claim 21 and wherein the wireless LAN protocol comprises Wi-Fi.

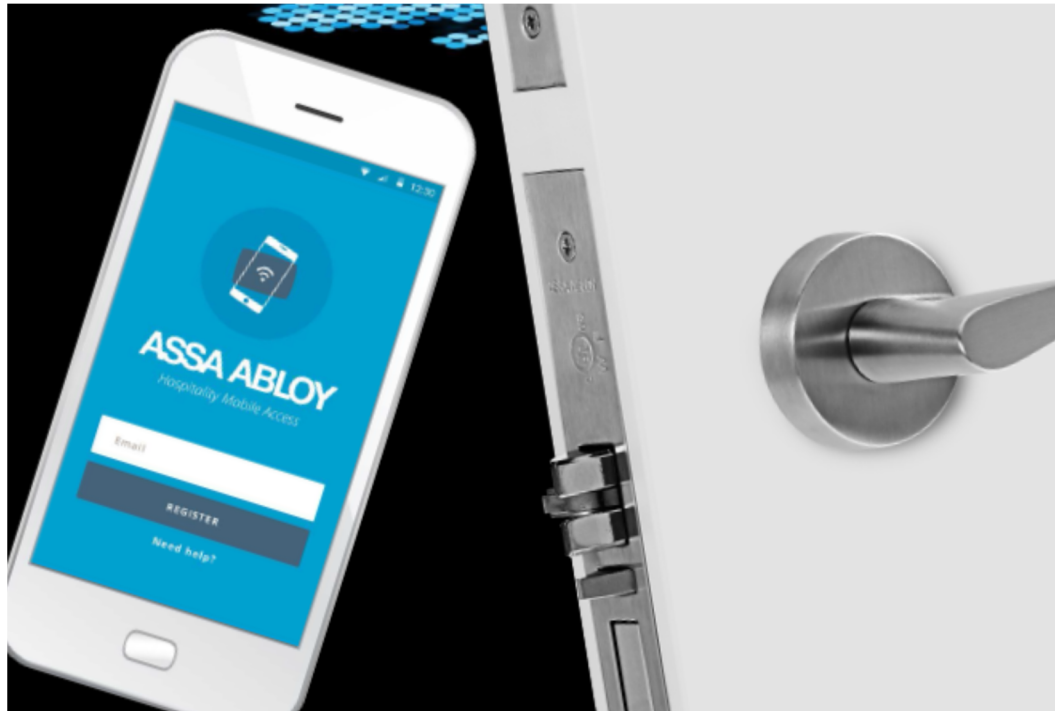


<https://apps.apple.com/us/app/assa-abloy-mobile-access/id793869814>

Claim 23

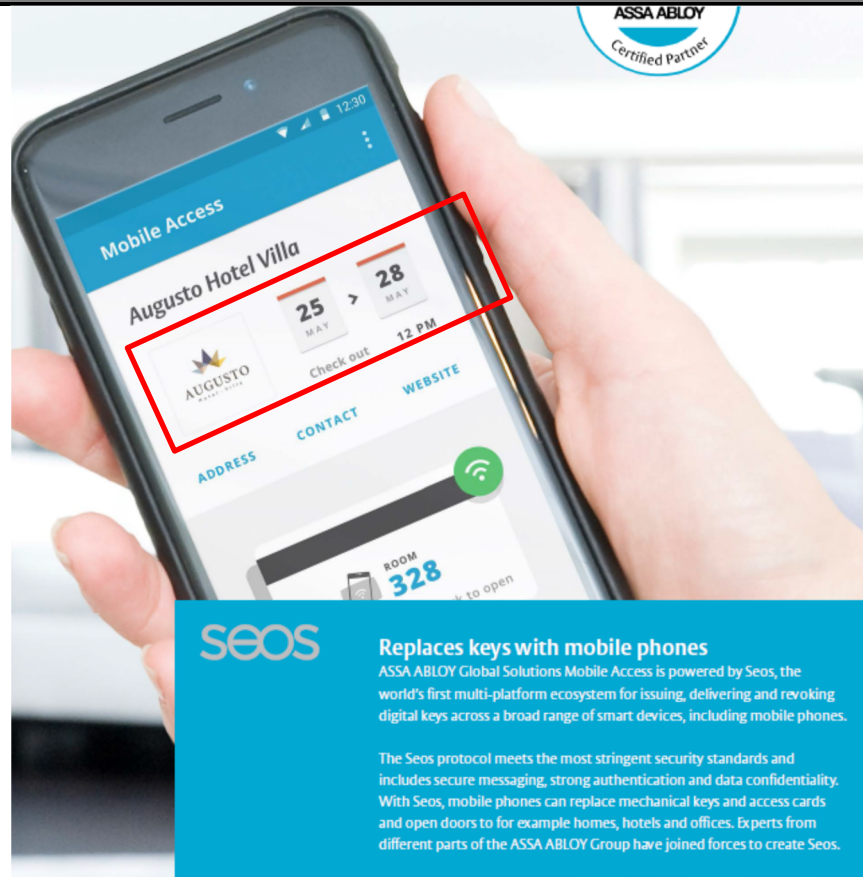
23. The access control system of claim 15, wherein the application automatically connects to the access device via the second communication protocol as the portable terminal approaches the access device.

ASSA's system includes, uses (and ASSA instructs end users to use), and/or practices each element of Claim 15 and wherein the application automatically connects to the access device via the second communication protocol as the portable terminal approaches the access device.



ASSA ABLOY Mobile Access Solutions Brochure, p. 1 (the “Mobile Access Brochure”).

Claim 23



Mobile Access Brochure, p. 5.

Claim 23	
	The guest receives a push notification noting that he/she is checked in and the <u>app will update with the room number and the mobile key when the room is ready.</u> Mobile Access Brochure, p. 6.

Claim 23

HOW IT WORKS - PROPERTY PERSPECTIVE



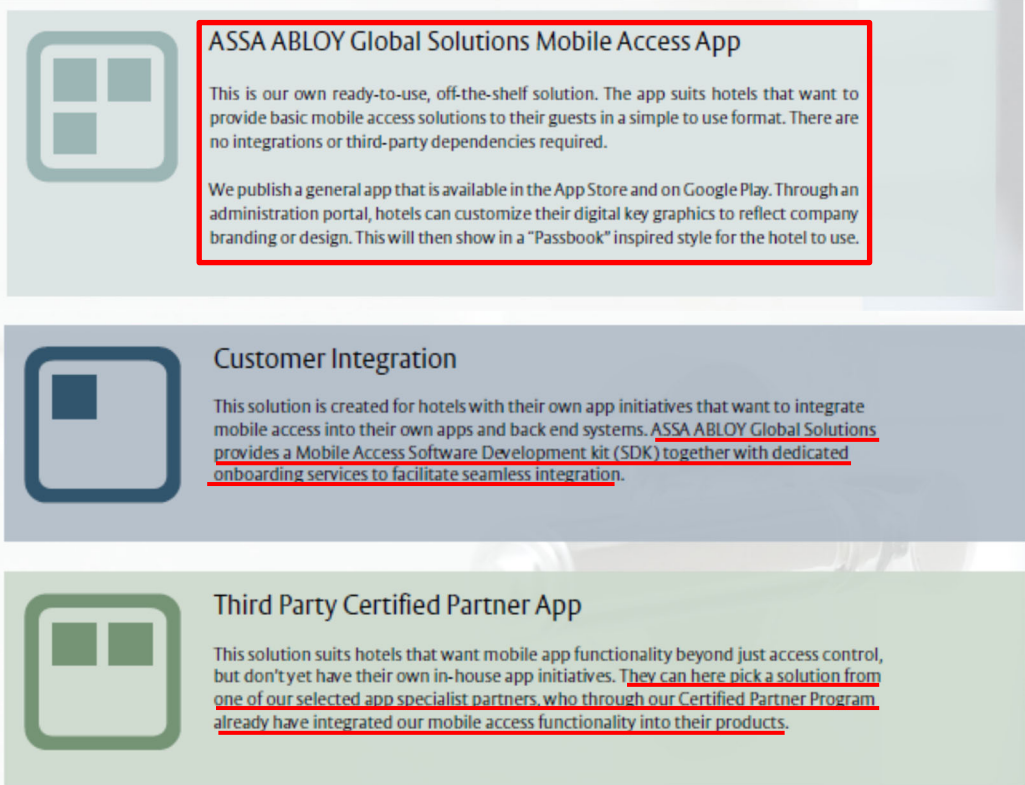
<https://www.assaabloyglobalsolutions.com/downloads/product-sheets/mobile-access/Mobile-Access-App-Product-Sheet-EN.pdf>

Claim 24	
24. The access control system of claim 15, wherein the reservation certificate is encrypted.	Upon information and belief, ASSA's access control system includes and/or uses (and ASSA instructs end users to use) an access device wherein the access device comprises a reservation certificate where at least a portion of the reservation certificate is encrypted. Upon information and belief, ASSA's access control device comprises reservation certificate that is encrypted using public key cryptography, which is currently the most common form of security for remote lock doors and secure communication between electronic devices.

Claim 25	
25. The access control system of claim 24, wherein the encrypted reservation certificate is decrypted by the access device.	Upon information and belief, ASSA's access control system includes and/or uses (and ASSA instructs end users to use) wherein the encrypted reservation certificate is decrypted by the access device. Upon information and belief, ASSA's access device comprises reservation certificate that is encrypted using public key cryptography, which is currently the most common form of security for remote lock doors and secure communication between electronic devices. In order to employ public key cryptography, ASSA's access device must necessarily decrypt the encrypted reservation certificate.

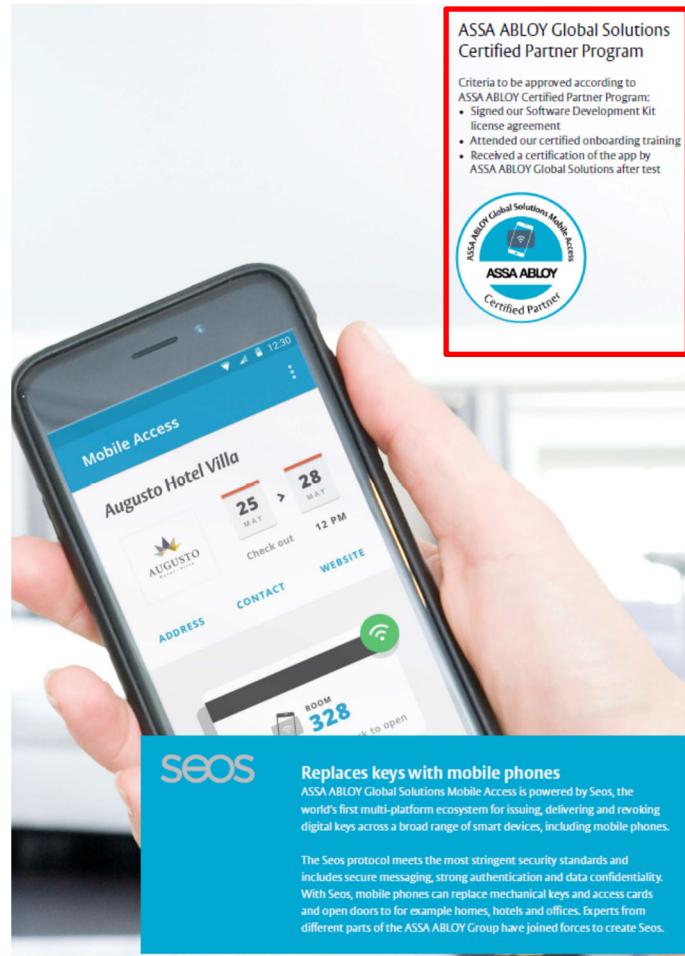
Claim 26	
26. An access control system comprising:	ASSA ABLOY AB, ASSAY ABLOY Mobile Services AB, and ASSA ABLOY Global Solutions AB ("ASSA") make, use (including via testing), sell, import, and/or offer for sale, and instruct their

Claim 26	
an access device comprising a communication module connected to a processor having control of a door lock;	subsidiaries, affiliates, and end users to use the ASSA ABLOY Global Solutions Mobile Access technology and associated App (“Mobile App”) feature as a key to a hotel room by using, among other technologies, integrated SEOS technology (which “Replaces Keys with Mobile Phones”), VingCard Classic Electronic Locks and VingCard Essence Electronic Locks and associated Bluetooth readers including, but not limited to, Bluetooth Low Energy readers, and processors included therein, and the associated hardware, software, applications, and functionality associated with this product and solution (hereinafter, the “Accused Products”), constituting an access control system comprising: an access device comprising a communication module connected to a processor having control of a door lock.  The image shows a white smartphone on the left with a blue app interface. The app has a logo at the top, followed by the text 'ASSA ABLOY' and 'Hospitality Mobile Access'. Below this is an 'Email' input field, a 'REGISTER' button, and a 'Need help?' link. To the right of the phone is a silver door lock mechanism with a handle and a keyhole. A blue signal icon is visible above the phone, suggesting a wireless connection to the lock.

Claim 26	
	ASSA ABLOY Mobile Access Solutions Brochure, p. 1 (the “Mobile Access Brochure”). ASSA also instructs and encourages others to use its Mobile Access Software Development kit (SDK) as integrated into their hotel customers mobile applications, which provides substantively identical features and functionality as the Mobile App.  ASSA ABLOY Global Solutions Mobile Access App This is our own ready-to-use, off-the-shelf solution. The app suits hotels that want to provide basic mobile access solutions to their guests in a simple to use format. There are no integrations or third-party dependencies required. We publish a general app that is available in the App Store and on Google Play. Through an administration portal, hotels can customize their digital key graphics to reflect company branding or design. This will then show in a “Passbook” inspired style for the hotel to use. Customer Integration This solution is created for hotels with their own app initiatives that want to integrate mobile access into their own apps and back end systems. <u>ASSA ABLOY Global Solutions provides a Mobile Access Software Development kit (SDK) together with dedicated onboarding services to facilitate seamless integration.</u> Third Party Certified Partner App This solution suits hotels that want mobile app functionality beyond just access control, but don't yet have their own in-house app initiatives. <u>They can here pick a solution from one of our selected app specialist partners, who through our Certified Partner Program already have integrated our mobile access functionality into their products.</u>

Claim 26

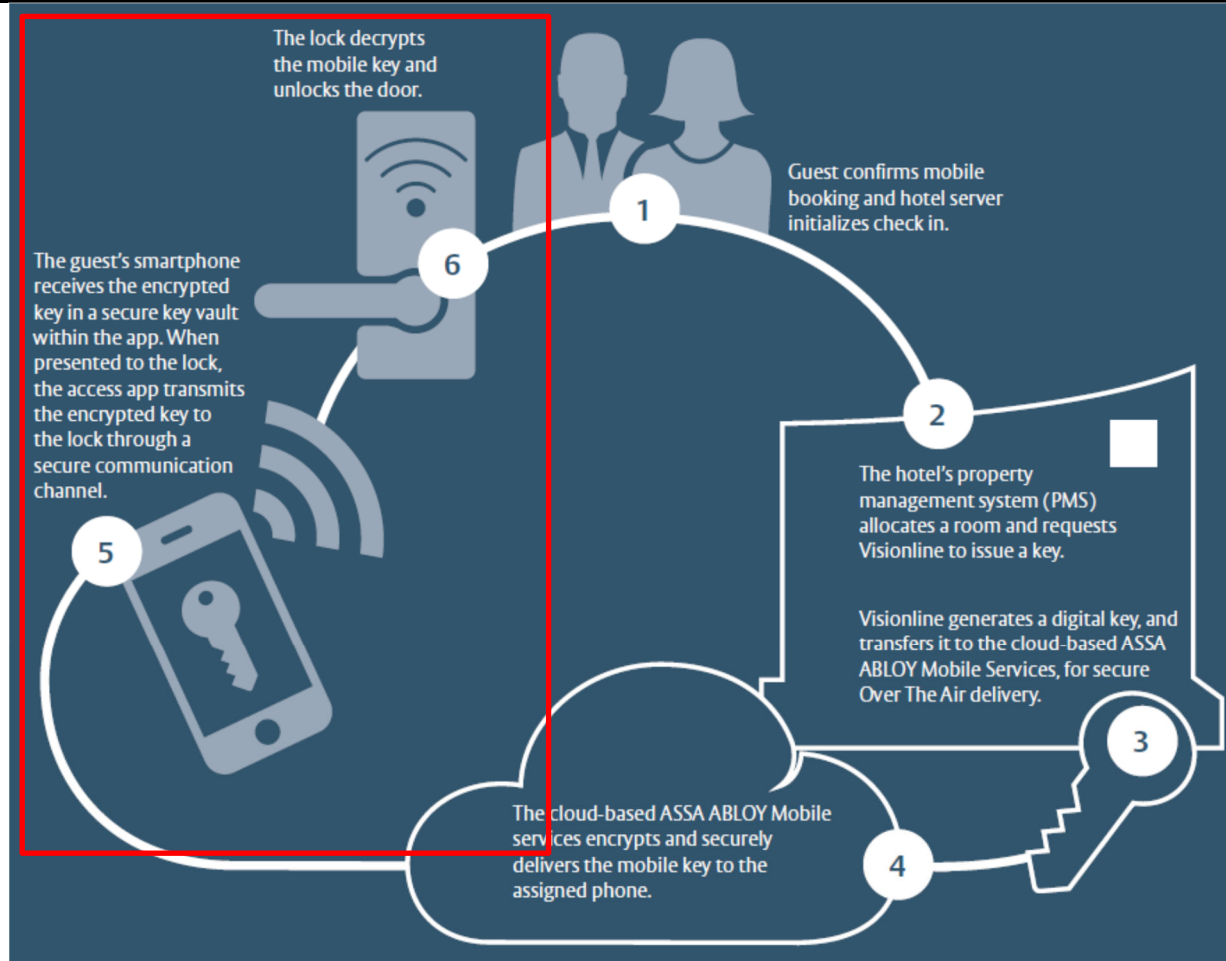
Mobile Access Brochure, p. 4.



Mobile Access Brochure, p. 5.

Claim 26	
	A blue icon depicting a smartphone on the left and a door lock on the right. A blue line connects the two, with three curved lines above it representing a signal. A blue circle with the number '5' is positioned above the smartphone. After ensuring that the Bluetooth is enabled, <u>the guest simply holds the smartphone to the door lock, waits for the solid green light and enters the room.</u> Mobile Access Brochure, p. 6.

Claim 26



Mobile Access Brochure, p. 9.

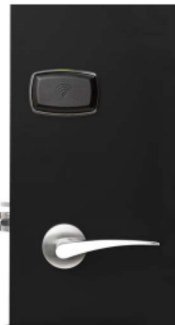
Claim 26

Lock system

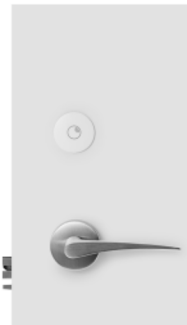
The latest generation of VingCard's RFID locks Classic, Signature, Essence and Allure are all compatible with Mobile Access. The only thing needed is to add a small Bluetooth Low Energy board to the lock.



Classic RFID



Signature RFID



Essence



Allure

Even with older versions of lock systems it's possible to install Mobile Access. You can keep most of the lock hardware and just upgrade the reader electronics to the latest RFID version and add the Bluetooth Low Energy board.

Software

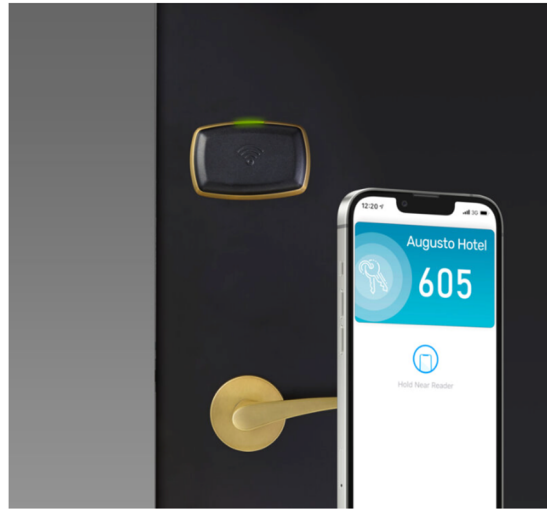
The latest version of Visionline is needed together with a Mobile Access license option.

It connects securely to the cloud-based ASSA ABLOY Global Solutions Mobile Access services.

Mobile Access Brochure, p. 8; *see also* Website

(<https://www.assaabloyglobalsolutions.com/en/hospitality-solutions/electronic-locks-for-hotels>)

Claim 26



Step 3: Activate Mobile Access

Without replacing existing hardware and with the addition of a Bluetooth Low Energy (BLE) reader, your property and guests can seamlessly begin to enjoy the contactless benefits of the technology.

<https://www.assaabloyglobalsolutions.com/en/hospitality-solutions/mobile-access-for-hospitality/rfid-upgrade>

Claim 26

Mobile Access Made Easy 2020

ASSA ABLOY Global Solutions Mobile Access

John Doe Operator

Press **Esc** to exit full screen

Augusto Hotel

Reservations

Building status

New reservation

Room number

3609

Reference

booking

Check in

2020-07-06

Check out

2020-07-10

Add guests

New guest

Name

Jane Doe

Email

janedoe@mail.com

Common rooms

+ Add guest

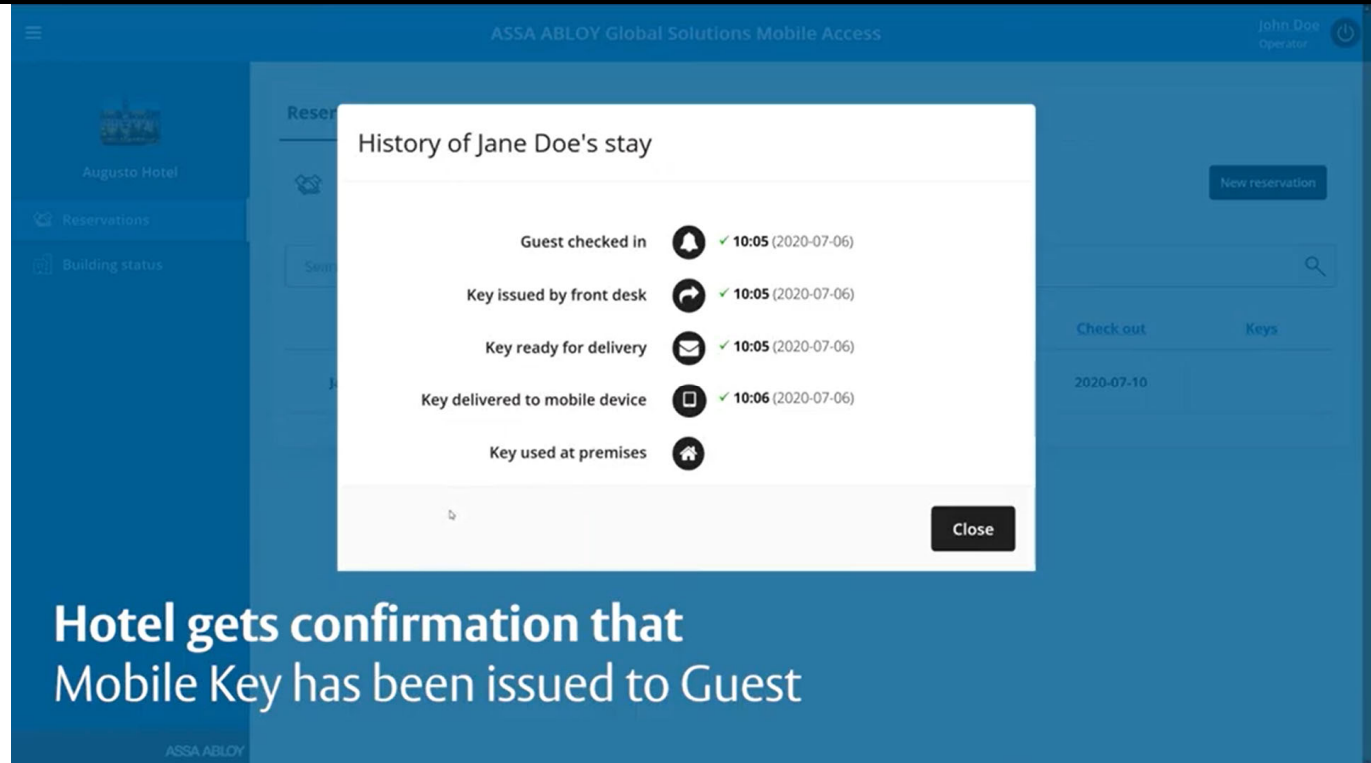
0:28 / 1:15

Scroll for details

Cancel

<https://youtu.be/YYvYMml-rj8>

Claim 26



**Hotel gets confirmation that
Mobile Key has been issued to Guest**

<https://youtu.be/YYvYMml-rj8>

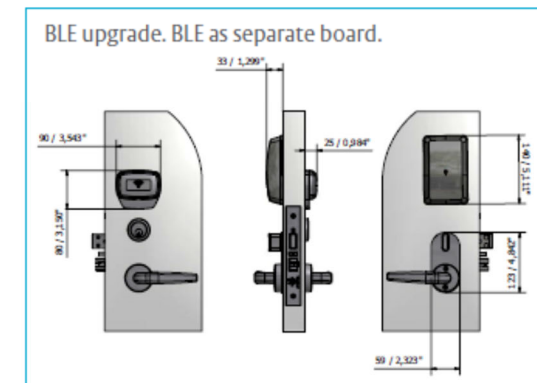
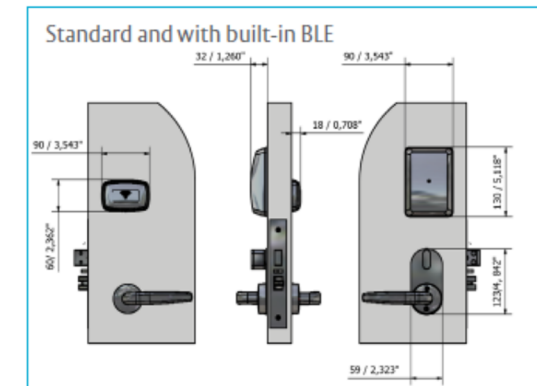
Claim 26

FEATURES

- : EPD (Environmental Product Declaration) certified
- : Supports the latest RFID technology
- : Supports Mobile Access
- : Online compatible
- : Easy upgrade from Signature Magstripe or Combo
- : Fire listed for use on fire doors (UL, BS, EN)
- : Case hardened full 1-inch (ANSI) throw deadbolt
- : Panic release function – the deadbolt and latch are automatically retracted by inside handle for easy regress in emergency situations
- : ADA compliant (users with physical disabilities)
- : Stainless steel parts for mechanical strength, corrosion resistance and attractive appearance
- : Optional high security mechanical override cylinder
- : Detailed audit trail: 3000 events in offline mode (Vostio and Visionline version 1.24 and above) and unlimited number of events in online mode
- : RFID Specifications:
 - 13,56MHz technology
 - Compatible with the following standards:
 - ISO 14443 A (MIFARE including Desfire)
 - ISO 14443 B
 - ISO 15693

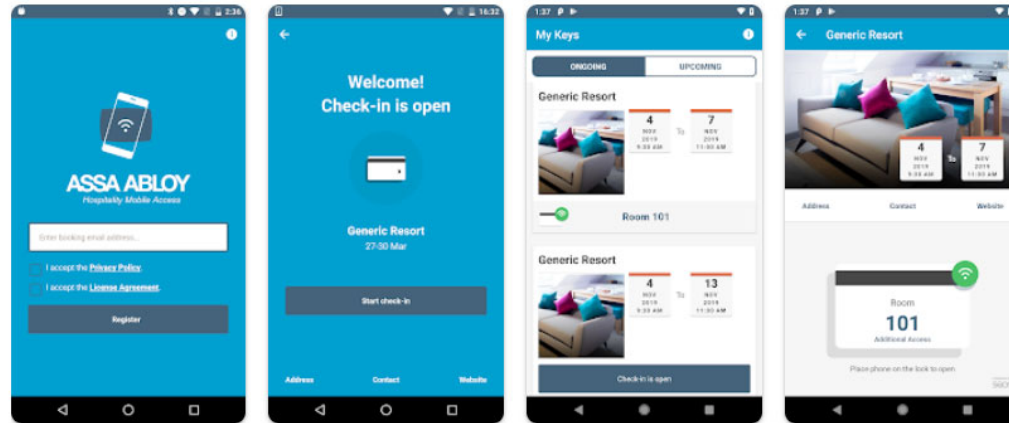
E.g., VingCard Signature RFID Product Sheet English, p. 1.

DIMENSIONS



Claim 26	
an application on a portable terminal; and	ASSA's system includes and/or uses (and ASSA instructs end users to use) an application on a portable terminal. ASSA ABLOY Mobile Access Solutions Brochure, p. 1 (the "Mobile Access Brochure").

Claim 26



About this app →

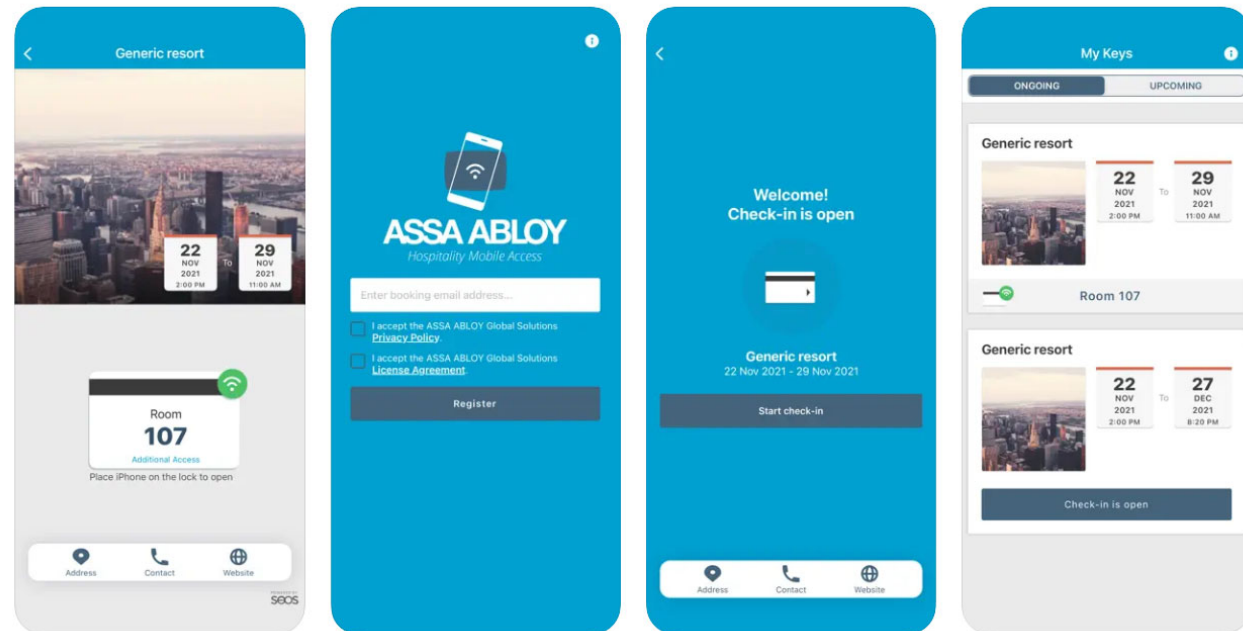
With ASSA ABLOY Hospitality Mobile Access you can check in to your hotel room before you arrive and receive your room key direct to your phone. When you arrive at the hotel, go straight to your room and open the door by holding your phone up against the lock. Your hotel key is securely delivered and stored inside your device and you don't need to worry about a keycard.

ASSA ABLOY Hospitality Mobile Access is available at select hotels around the world.

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https://play.google.com/store/apps/details?id=com.assaabloy.hospitality.mobileaccess.hospitalitymobileaccess&hl=en_US&gl=US

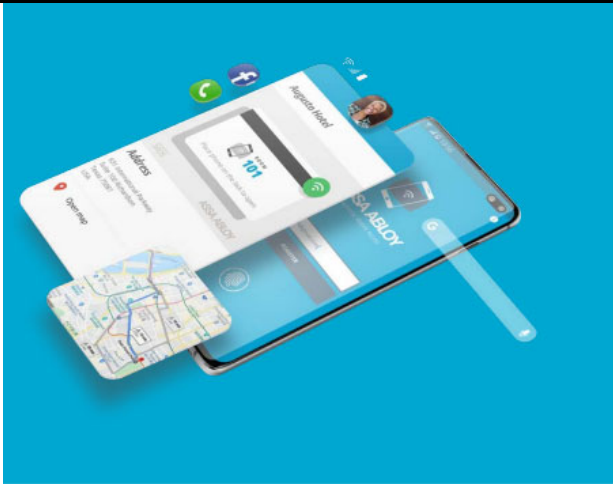
Claim 26

Screenshots iPad iPhone



<https://apps.apple.com/us/app/hospitality-mobile-access/id1017290566?platform=iphone>

Claim 26	
	Open your hotel room with your iPhone! With ASSA ABLOY Global Solutions Mobile Access you can check in to your hotel room before you arrive and receive your room key direct to your phone. When you arrive at the hotel, go straight to your room and open the door by holding your phone up against the lock. Your hotel key is securely delivered and stored inside your device and you don't need to worry about a keycard. ASSA ABLOY Global Solutions Mobile Access is available at selected hotels around the world. About our Mobile Access solution: The Mobile Access solution from ASSA ABLOY Global Solutions makes VingCard RFID locks operable with mobile devices through BLE (Bluetooth Low Energy) technology. The solution platform includes highly reliable and secure mobile key management and Trusted Service Manager (TSM) services. ASSA ABLOY Global Solutions Mobile Access is powered by award winning Seos® technology from ASSA ABLOY, learn more on our web site. https://apps.apple.com/us/app/hospitality-mobile-access/id1017290566?platform=iphone

Claim 26	
	 Unique User Experience Mobile Access offers guests a whole new hotel experience. Depending on the solution deployed they can reserve and book their room using their mobile phone or device. They can then use the phone to check in and check out. https://www.assaabloyglobalsolutions.com/en/hospitality-solutions

Claim 26

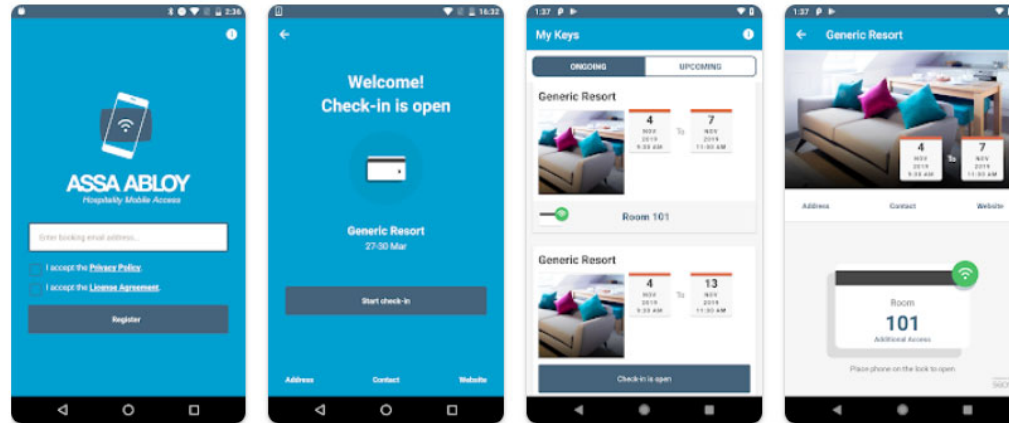
How It Works?

- 1 Download the application.
- 2 Make the reservation.
- 3 Check into the room.
- 4 Bypass frontdesk upon arrival and go to the room.
- 5 Open door with the use of mobile application / mobile key.

<https://www.assaabloyglobalsolutions.com/en/hospitality-solutions>

Claim 26	
a server to provide a communication setting to the application, the communication setting corresponding to the access device, and further to provide, via a first communication protocol, a reservation certificate to the application, the reservation certificate comprising an interval of a reservation,	ASSA's access control system comprises a server to provide a communication setting to the application, the communication setting corresponding to the access device, and further to provide, via a first communication protocol, a reservation certificate to the application, the reservation certificate comprising an interval of a reservation. https://www.assaabloy.com/tr/en/stories/blog/assa-abloy-mobile-access-technology; <i>see also</i> https://www.assaabloyglobalsolutions.com/en/hospitality-solutions/mobile-access-for-hospitality/rfid-upgrade.

Claim 26



About this app →

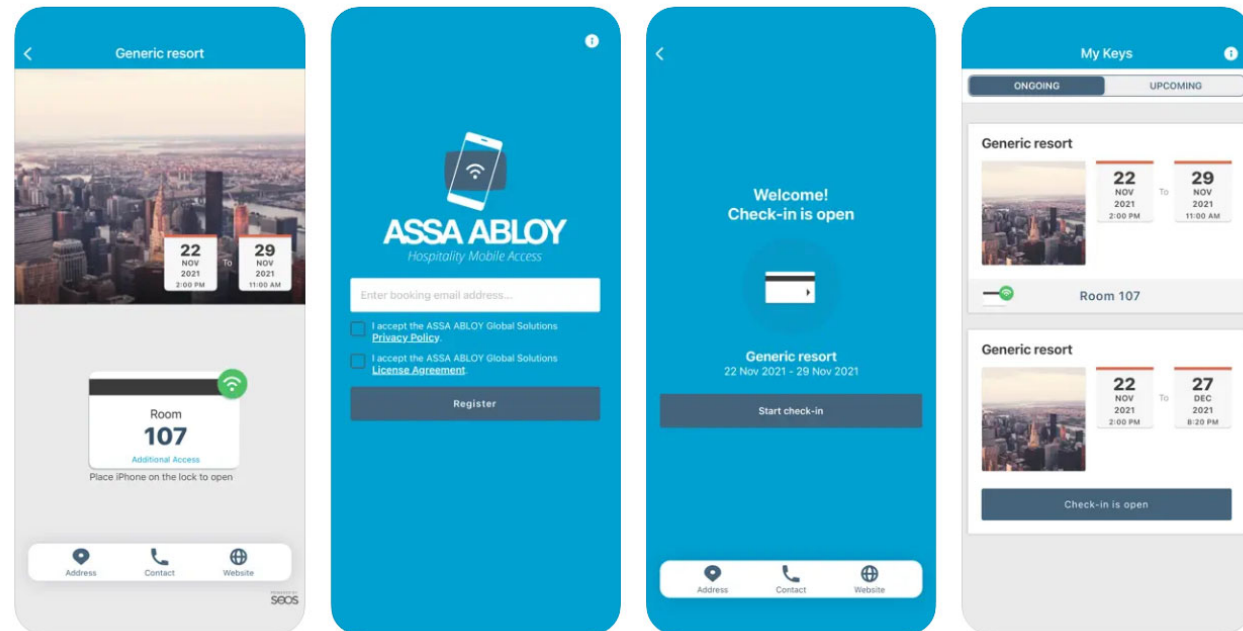
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ASSA ABLOY Hospitality Mobile Access is available at select hotels around the world.

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https://play.google.com/store/apps/details?id=com.assaabloy.hospitality.mobileaccess.hospitalitymobileaccess&hl=en_US&gl=US

Claim 26

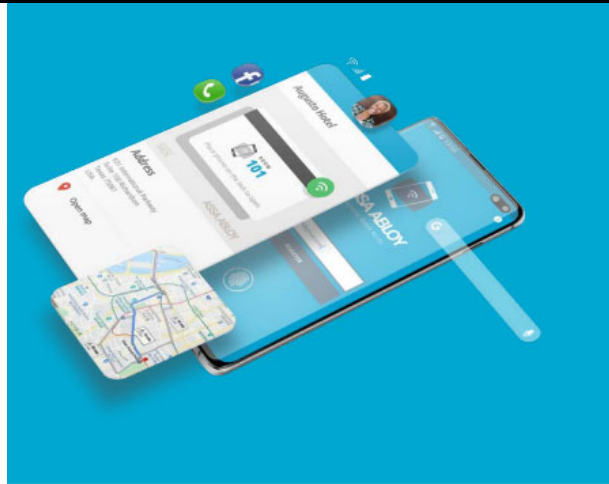
Screenshots iPad iPhone



<https://apps.apple.com/us/app/hospitality-mobile-access/id1017290566?platform=iphone>

Claim 26	
	Open your hotel room with your iPhone! With ASSA ABLOY Global Solutions Mobile Access you can check in to your hotel room before you arrive and receive your room key direct to your phone. When you arrive at the hotel, go straight to your room and open the door by holding your phone up against the lock. Your hotel key is securely delivered and stored inside your device and you don't need to worry about a keycard. ASSA ABLOY Global Solutions Mobile Access is available at selected hotels around the world. About our Mobile Access solution: The Mobile Access solution from ASSA ABLOY Global Solutions makes VingCard RFID locks operable with mobile devices through BLE (Bluetooth Low Energy) technology. The solution platform includes highly reliable and secure mobile key management and Trusted Service Manager (TSM) services. ASSA ABLOY Global Solutions Mobile Access is powered by award winning Seos® technology from ASSA ABLOY, learn more on our web site. https://apps.apple.com/us/app/hospitality-mobile-access/id1017290566?platform=iphone

Claim 26



Unique User Experience

Mobile Access offers guests a whole new hotel experience. Depending on the solution deployed they can reserve and book their room using their mobile phone or device. They can then use the phone to check in and check out.

<https://www.assaabloyglobalsolutions.com/en/hospitality-solutions>

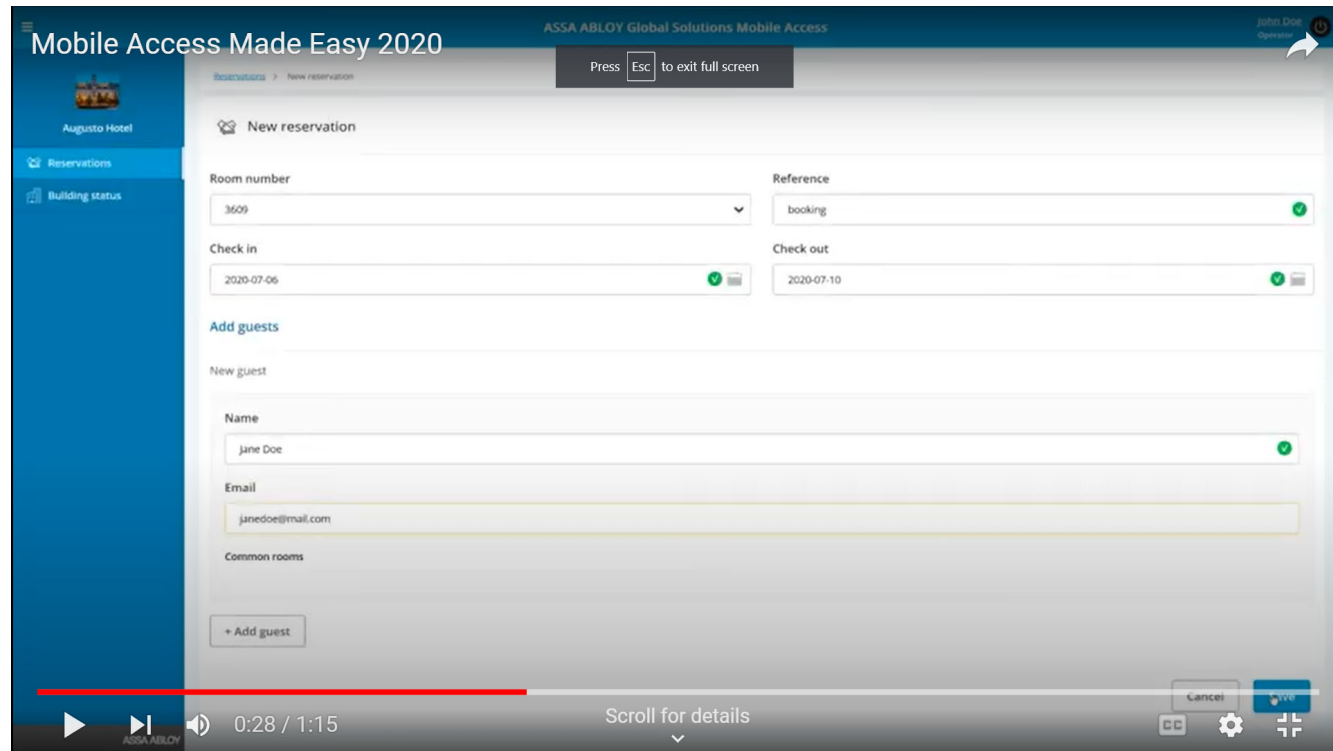
Claim 26

How It Works?

- 1 Download the application.
- 2 Make the reservation.
- 3 Check into the room.
- 4 Bypass frontdesk upon arrival and go to the room.
- 5 Open door with the use of mobile application / mobile key.

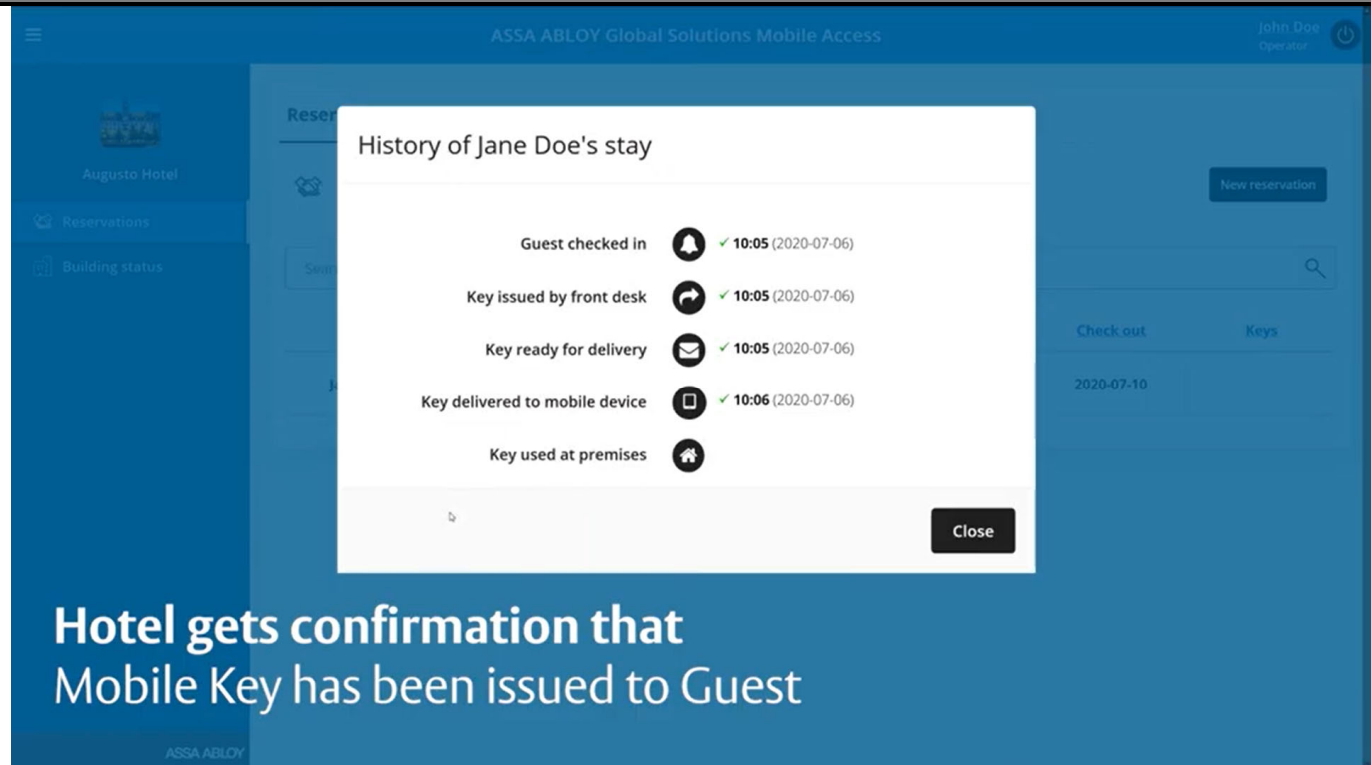
<https://www.assaabloyglobalsolutions.com/en/hospitality-solutions>

Claim 26



<https://youtu.be/YYvYMml-rj8>

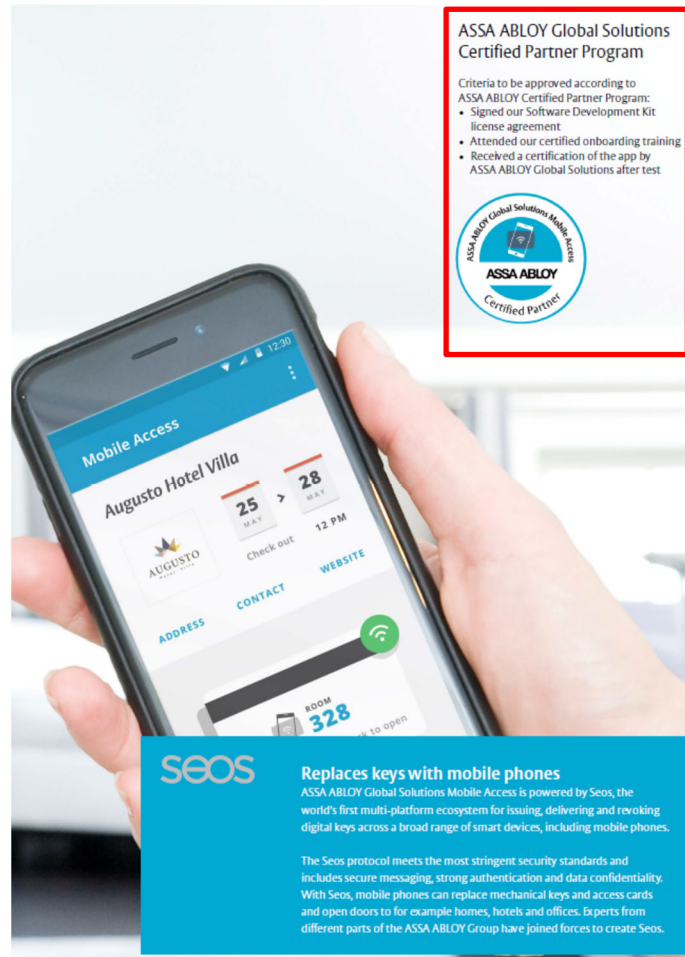
Claim 26



<https://youtu.be/YYvYMml-rj8>

Claim 26	
	 ASSA ABLOY Global Solutions Mobile Access App This is our own ready-to-use, off-the-shelf solution. The app suits hotels that want to provide basic mobile access solutions to their guests in a simple to use format. There are no integrations or third-party dependencies required. We publish a general app that is available in the App Store and on Google Play. Through an administration portal, hotels can customize their digital key graphics to reflect company branding or design. This will then show in a "Passbook" inspired style for the hotel to use.  Customer Integration This solution is created for hotels with their own app initiatives that want to integrate mobile access into their own apps and back end systems. <u>ASSA ABLOY Global Solutions provides a Mobile Access Software Development kit (SDK) together with dedicated onboarding services to facilitate seamless integration.</u>  Third Party Certified Partner App This solution suits hotels that want mobile app functionality beyond just access control, but don't yet have their own in-house app initiatives. <u>They can here pick a solution from one of our selected app specialist partners, who through our Certified Partner Program already have integrated our mobile access functionality into their products.</u> Mobile Access Brochure, p. 4.

Claim 26

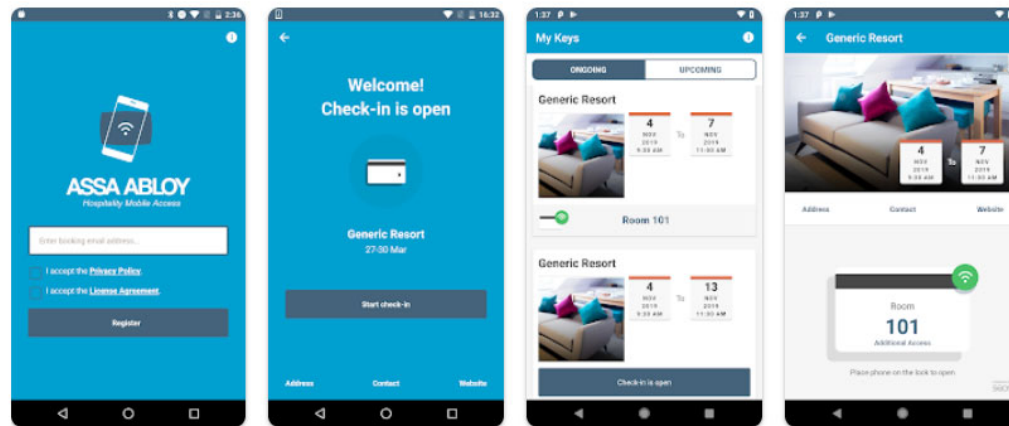


Mobile Access Brochure, p. 5.

Claim 26

wherein the processor receives the reservation certificate from the application via a second communication protocol that is different from the first communication protocol, based on use by the application of the communication setting, wherein the processor compares the interval of the reservation to a current time accessible to the processor to determine if the reservation certificate is current; and wherein the processor activates the door lock when the processor determines that the reservation certificate is current.

ASSA's access control system includes the foregoing application, wherein the processor receives the reservation certificate from the application via a second communication protocol that is different from the first communication protocol, based on use by the application of the communication setting, wherein the processor compares the interval of the reservation to a current time accessible to the processor to determine if the reservation certificate is current; and wherein the processor activates the door lock when the processor determines that the reservation certificate is current.



About this app →

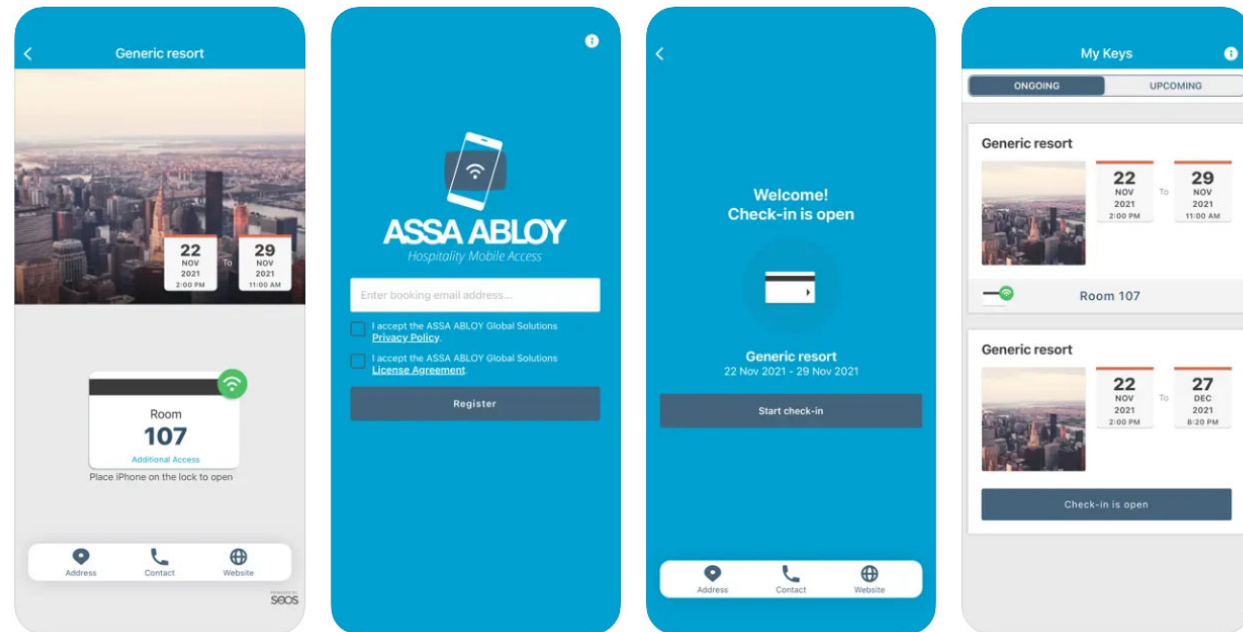
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ASSA ABLOY Hospitality Mobile Access is available at select hotels around the world.

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https://play.google.com/store/apps/details?id=com.assaabloy.hospitality.mobileaccess.hospitalitymobileaccess&hl=en_US&gl=US

Claim 26

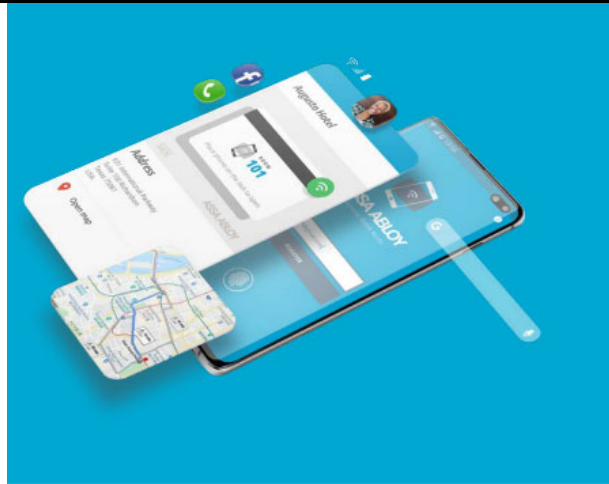
Screenshots iPad iPhone



<https://apps.apple.com/us/app/hospitality-mobile-access/id1017290566?platform=iphone>

Claim 26	
	Open your hotel room with your iPhone! With ASSA ABLOY Global Solutions Mobile Access you can check in to your hotel room before you arrive and receive your room key direct to your phone. When you arrive at the hotel, go straight to your room and open the door by holding your phone up against the lock. Your hotel key is securely delivered and stored inside your device and you don't need to worry about a keycard. ASSA ABLOY Global Solutions Mobile Access is available at selected hotels around the world. About our Mobile Access solution: The Mobile Access solution from ASSA ABLOY Global Solutions makes VingCard RFID locks operable with mobile devices through BLE (Bluetooth Low Energy) technology. The solution platform includes highly reliable and secure mobile key management and Trusted Service Manager (TSM) services. ASSA ABLOY Global Solutions Mobile Access is powered by award winning Seos® technology from ASSA ABLOY, learn more on our web site. https://apps.apple.com/us/app/hospitality-mobile-access/id1017290566?platform=iphone

Claim 26



Unique User Experience

Mobile Access offers guests a whole new hotel experience. Depending on the solution deployed they can reserve and book their room using their mobile phone or device. They can then use the phone to check in and check out.

<https://www.assaabloyglobalsolutions.com/en/hospitality-solutions>

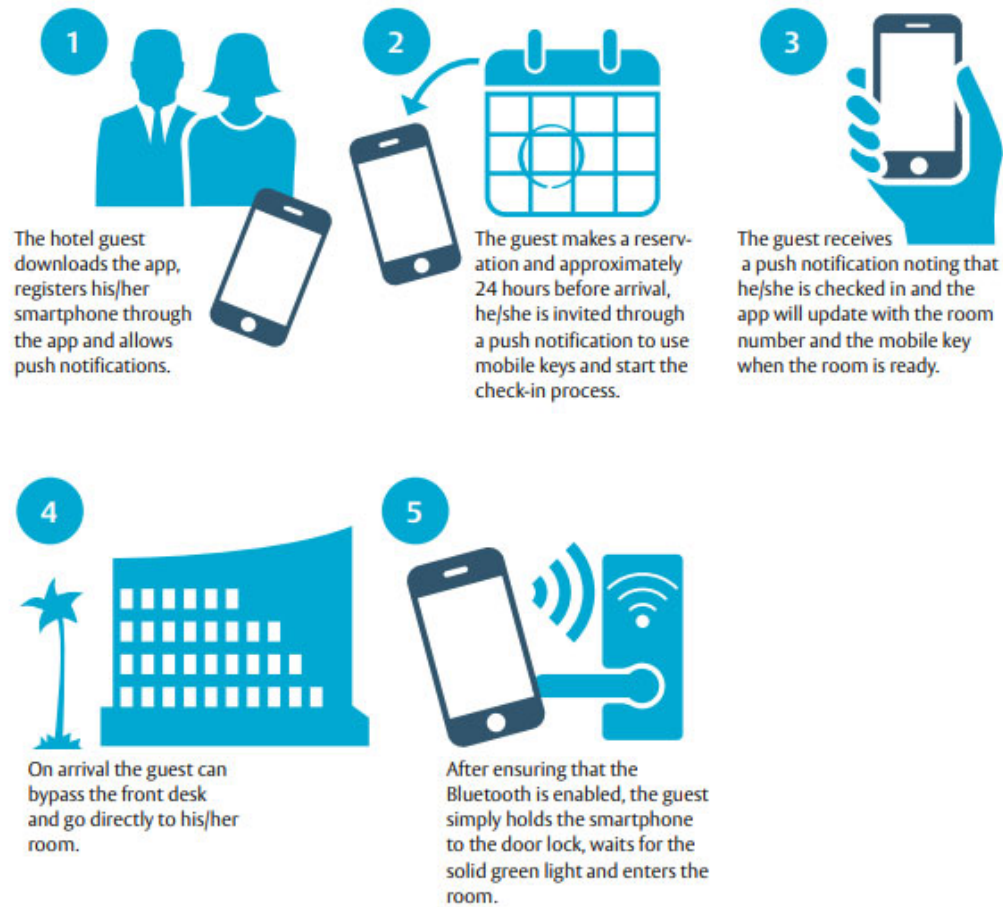
Claim 26

How It Works?

- 1 Download the application.
- 2 Make the reservation.
- 3 Check into the room.
- 4 Bypass frontdesk upon arrival and go to the room.
- 5 Open door with the use of mobile application / mobile key.

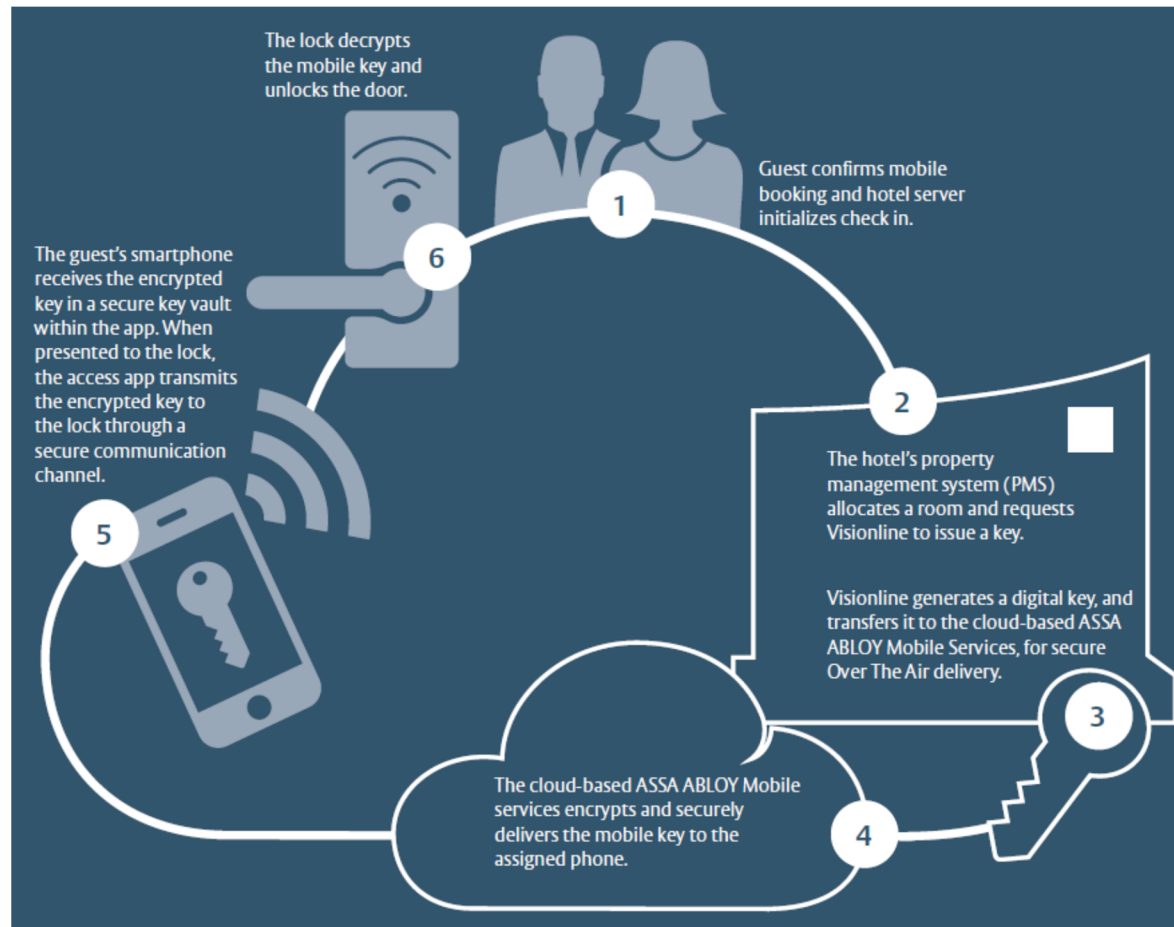
<https://www.assaabloyglobalsolutions.com/en/hospitality-solutions>

Claim 26



<https://www.assaabloyglobalsolutions.com/en/hospitality-solutions>

Claim 26

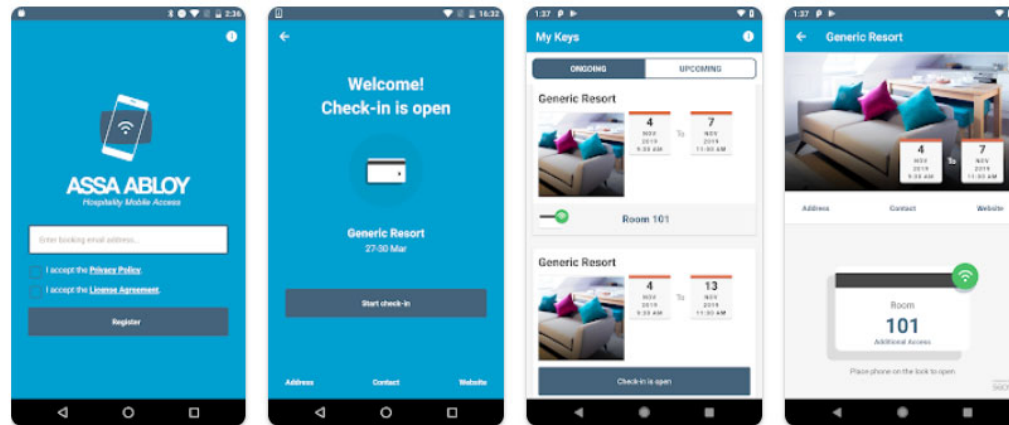


Mobile Access Brochure, p. 9.

Claim 26	
	HOW IT WORKS - PROPERTY PERSPECTIVE  The diagram illustrates a five-step process for mobile access from a property perspective. Each step is represented by an icon and a numbered description in a grey box: Step 1: Property receives reservation confirmation from guest. The icon shows a computer monitor with a calendar displaying the number 24 and a Wi-Fi signal icon. Step 2: Notify guest of registration options. The icon shows a computer monitor with a calendar grid, a Wi-Fi signal icon, and silhouettes of a man and a woman. Step 3: Assign guest room. The icon shows a computer monitor displaying 'AVAILABLE ROOMS' with options 101, 102, and 103, a Wi-Fi signal icon, and a smartphone displaying room 101. Step 4: Send guest digital key. The icon shows a computer monitor with a key icon, a Wi-Fi signal icon, and a smartphone with a key icon. Step 5: Key is automatically cancelled upon guest checkout. The icon shows a computer monitor with a clock icon, a Wi-Fi signal icon, and a smartphone with a crossed-out key icon. https://www.assaabloyglobalsolutions.com/downloads/product-sheets/mobile-access/Mobile-Access-App-Product-Sheet-EN.pdf

Claim 27	
27. The access control system of claim 26, wherein the first communication protocol comprises a cellular protocol.	ASSA's system includes, uses (and ASSA instructs end users to use), and/or practices each element of Claim 26 and wherein the first communication protocol comprises a cellular protocol. HOW IT WORKS - PROPERTY PERSPECTIVE  The diagram illustrates the process in five numbered steps: 1 Property receives reservation confirmation from guest: A computer monitor displays a calendar with the date '24' highlighted. A wireless signal icon is shown above the monitor. 2 Notify guest of registration options: A computer monitor displays a grid of 'X' marks. To the right, a man and a woman are shown. A wireless signal icon is above the monitor. 3 Assign guest room: A computer monitor displays 'AVAILABLE ROOMS' with circles for '101', '102', and '103'. To the right, a smartphone displays '101'. A wireless signal icon is above the monitor. 4 Send guest digital key: A computer monitor displays a key icon. To the right, a smartphone displays a key icon. A wireless signal icon is above the monitor. 5 Key is automatically cancelled upon guest checkout: A computer monitor displays a clock icon. To the right, a smartphone displays a key icon with a diagonal line through it. A wireless signal icon is above the monitor. https://www.assaabloyglobalsolutions.com/downloads/product-sheets/mobile-access/Mobile-Access-App-Product-Sheet-EN.pdf

Claim 27



About this app →

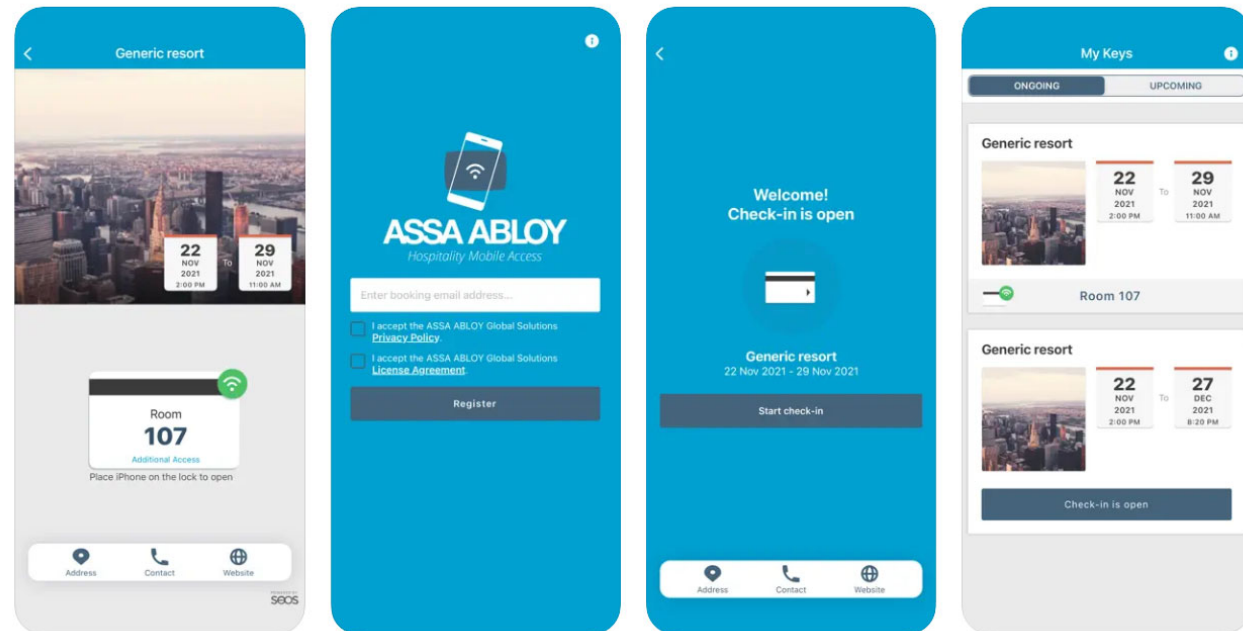
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ASSA ABLOY Hospitality Mobile Access is available at select hotels around the world.

...
https://play.google.com/store/apps/details?id=com.assaabloy.hospitality.mobileaccess.hospitalitymobileaccess&hl=en_US&gl=US

Claim 27

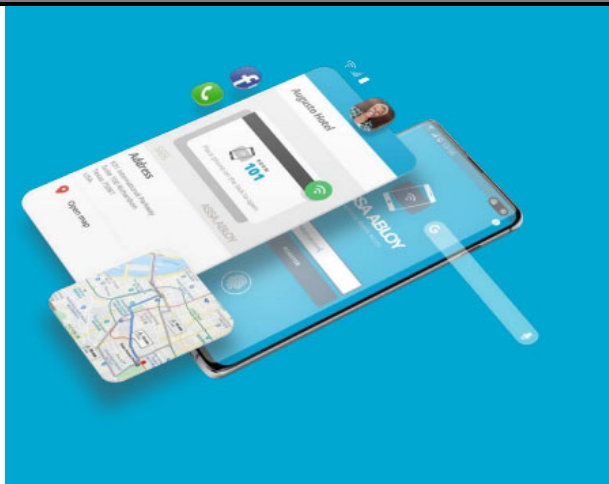
Screenshots iPad iPhone



<https://apps.apple.com/us/app/hospitality-mobile-access/id1017290566?platform=iphone>

Claim 27	
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Claim 27



Unique User Experience

Mobile Access offers guests a whole new hotel experience. Depending on the solution deployed they can reserve and book their room using their mobile phone or device. They can then use the phone to check in and check out.

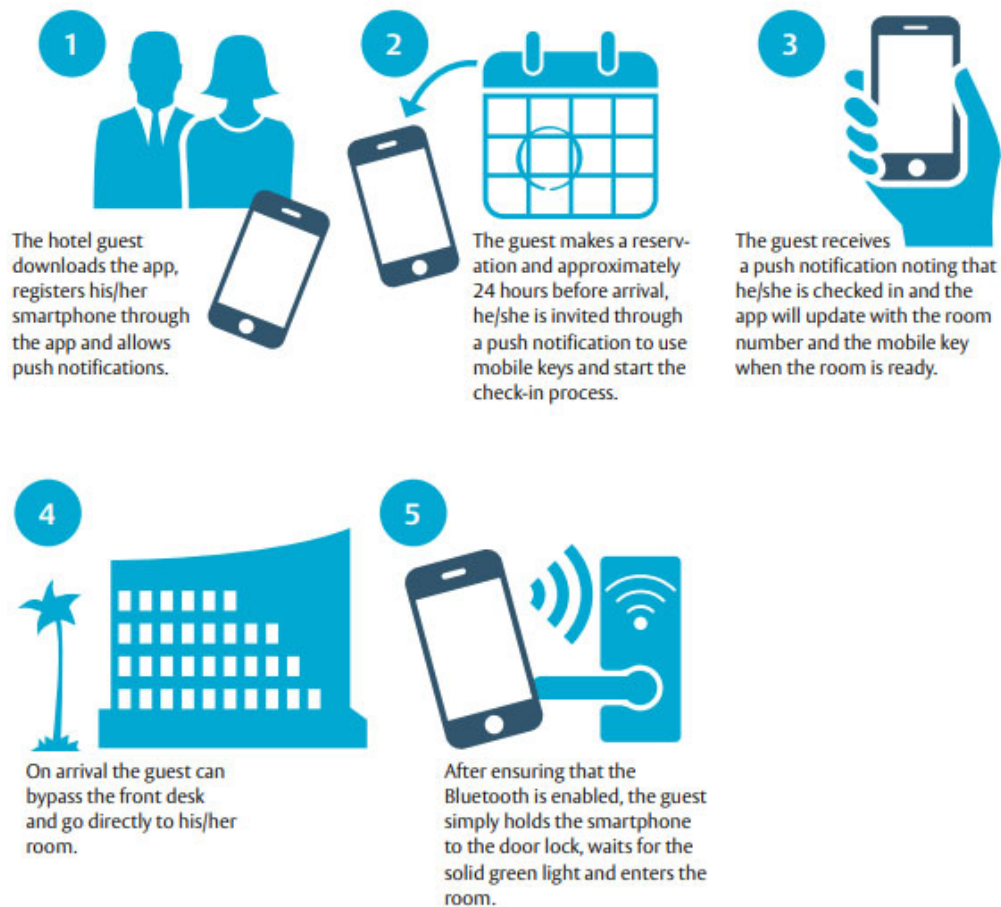
<https://www.assaabloyglobalsolutions.com/en/hospitality-solutions>

How It Works?

- 1 Download the application.
- 2 Make the reservation.
- 3 Check into the room.
- 4 Bypass frontdesk upon arrival and go to the room.
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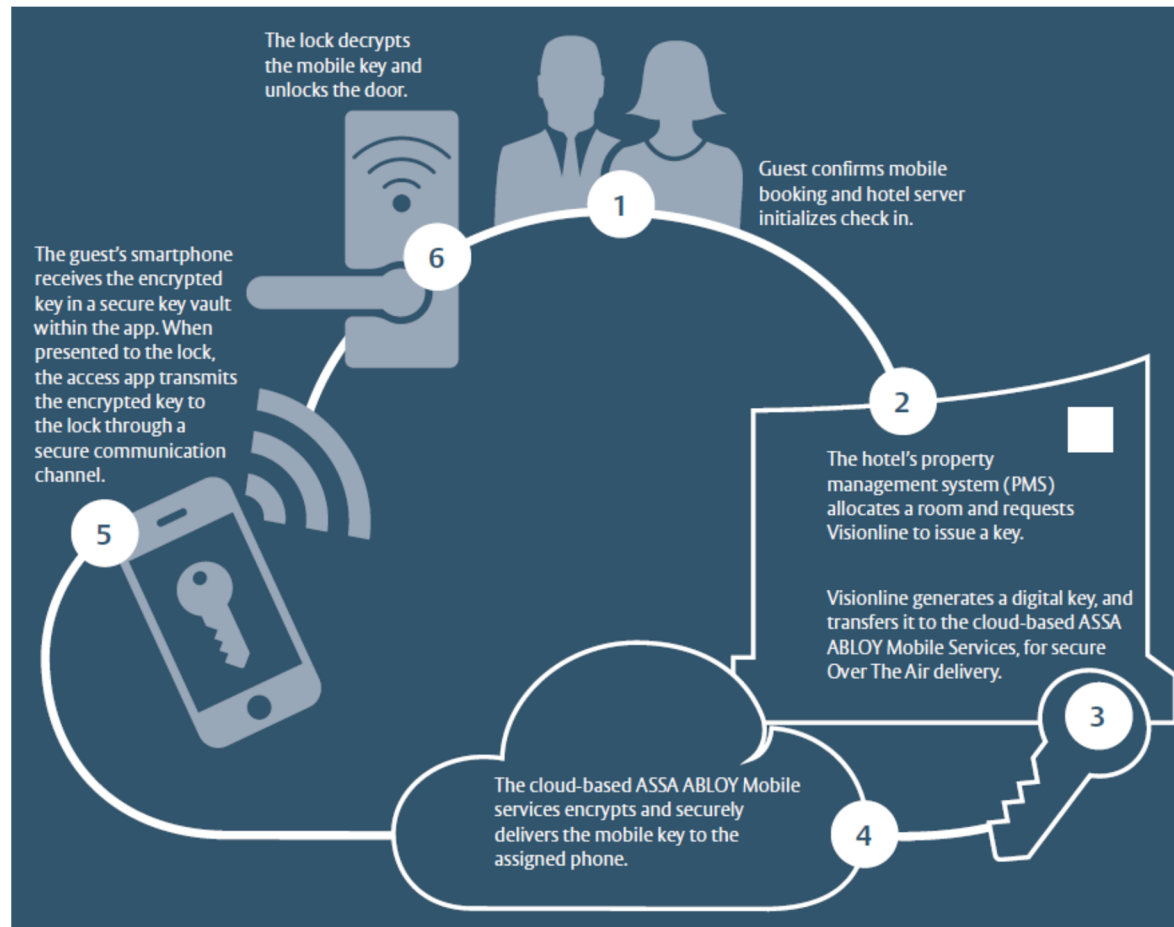
<https://www.assaabloyglobalsolutions.com/en/hospitality-solutions>

Claim 27



<https://www.assaabloyglobalsolutions.com/en/hospitality-solutions>

Claim 27



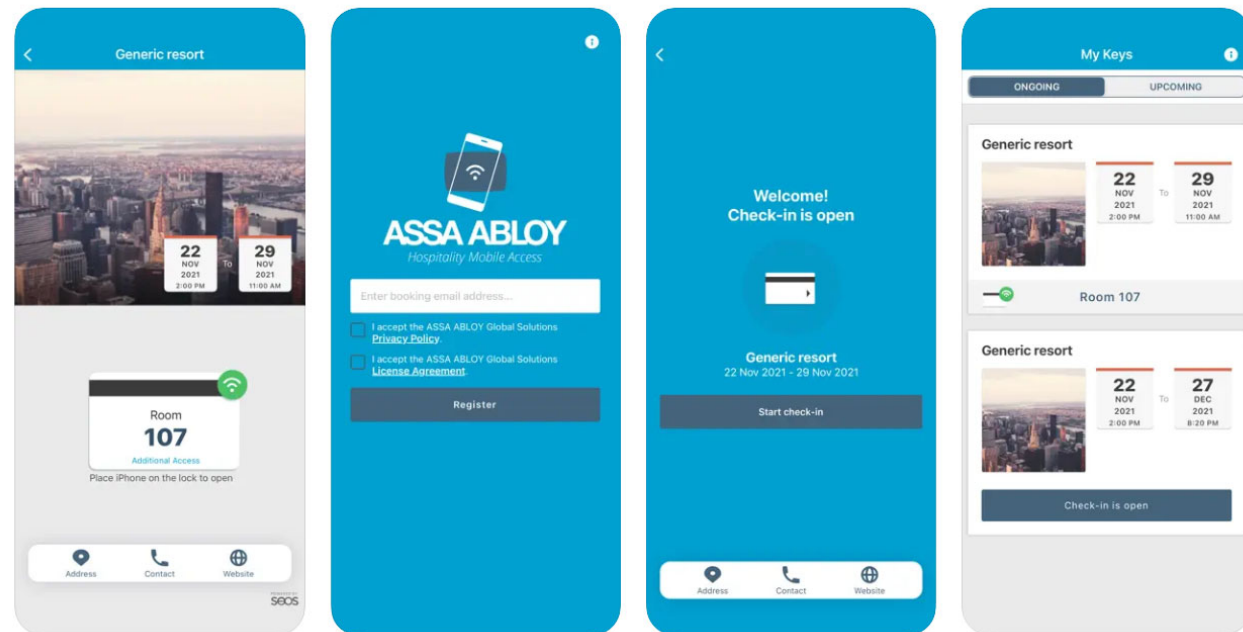
Mobile Access Brochure, p. 9.

Claim 28	
28. The access control system of claim 26, wherein the first communication protocol comprises a wireless LAN protocol.	ASSA's system includes, uses (and ASSA instructs end users to use), and/or practices each element of Claim 26 and wherein the first communication protocol comprises a wireless LAN protocol. About this app → With ASSA ABLOY Hospitality Mobile Access you can check in to your hotel room before you arrive and receive your room key direct to your phone. When you arrive at the hotel, go straight to your room and open the door by holding your phone up against the lock. Your hotel key is securely delivered and stored inside your device and you don't need to worry about a keycard. ASSA ABLOY Hospitality Mobile Access is available at select hotels around the world.

Claim 28

https://play.google.com/store/apps/details?id=com.assaabloyn.hospitality.mobileaccess.hospitalitymobileaccess&hl=en_US&gl=US

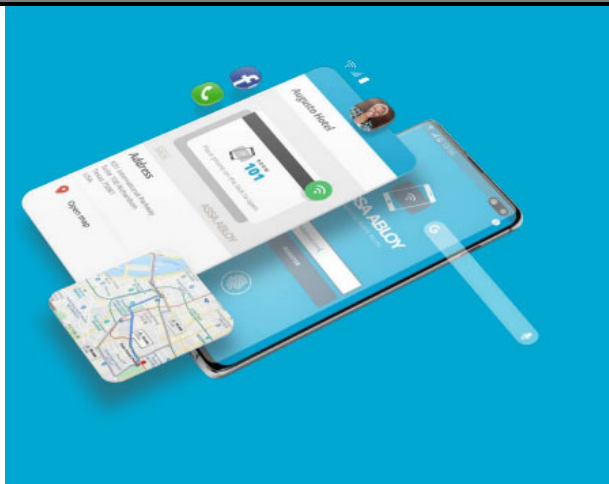
Screenshots iPad iPhone



<https://apps.apple.com/us/app/hospitality-mobile-access/id1017290566?platform=iphone>

Claim 28	
	Open your hotel room with your iPhone! With ASSA ABLOY Global Solutions Mobile Access you can check in to your hotel room before you arrive and receive your room key direct to your phone. When you arrive at the hotel, go straight to your room and open the door by holding your phone up against the lock. Your hotel key is securely delivered and stored inside your device and you don't need to worry about a keycard. ASSA ABLOY Global Solutions Mobile Access is available at selected hotels around the world. About our Mobile Access solution: The Mobile Access solution from ASSA ABLOY Global Solutions makes VingCard RFID locks operable with mobile devices through BLE (Bluetooth Low Energy) technology. The solution platform includes highly reliable and secure mobile key management and Trusted Service Manager (TSM) services. ASSA ABLOY Global Solutions Mobile Access is powered by award winning Seos® technology from ASSA ABLOY, learn more on our web site. https://apps.apple.com/us/app/hospitality-mobile-access/id1017290566?platform=iphone

Claim 28



Unique User Experience

Mobile Access offers guests a whole new hotel experience. Depending on the solution deployed they can reserve and book their room using their mobile phone or device. They can then use the phone to check in and check out.

<https://www.assaabloyglobalsolutions.com/en/hospitality-solutions>

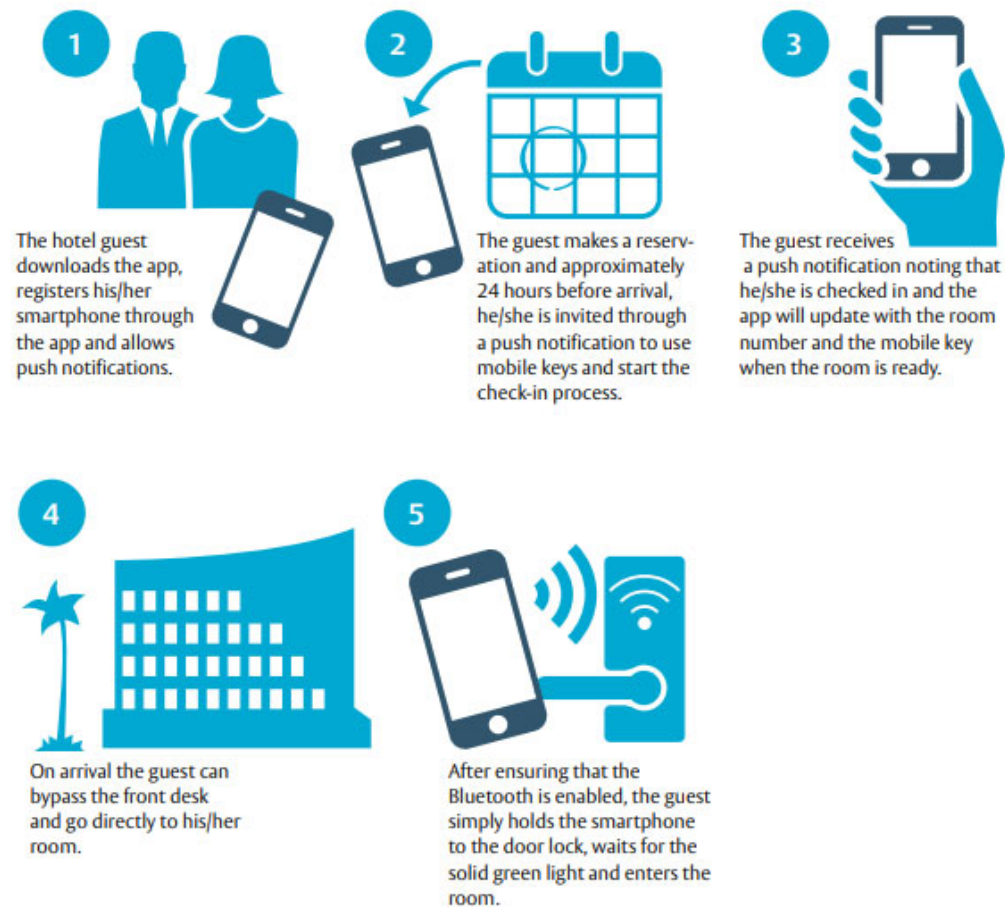
Claim 28

How It Works?

- 1 Download the application.
- 2 Make the reservation.
- 3 Check into the room.
- 4 Bypass frontdesk upon arrival and go to the room.
- 5 Open door with the use of mobile application / mobile key.

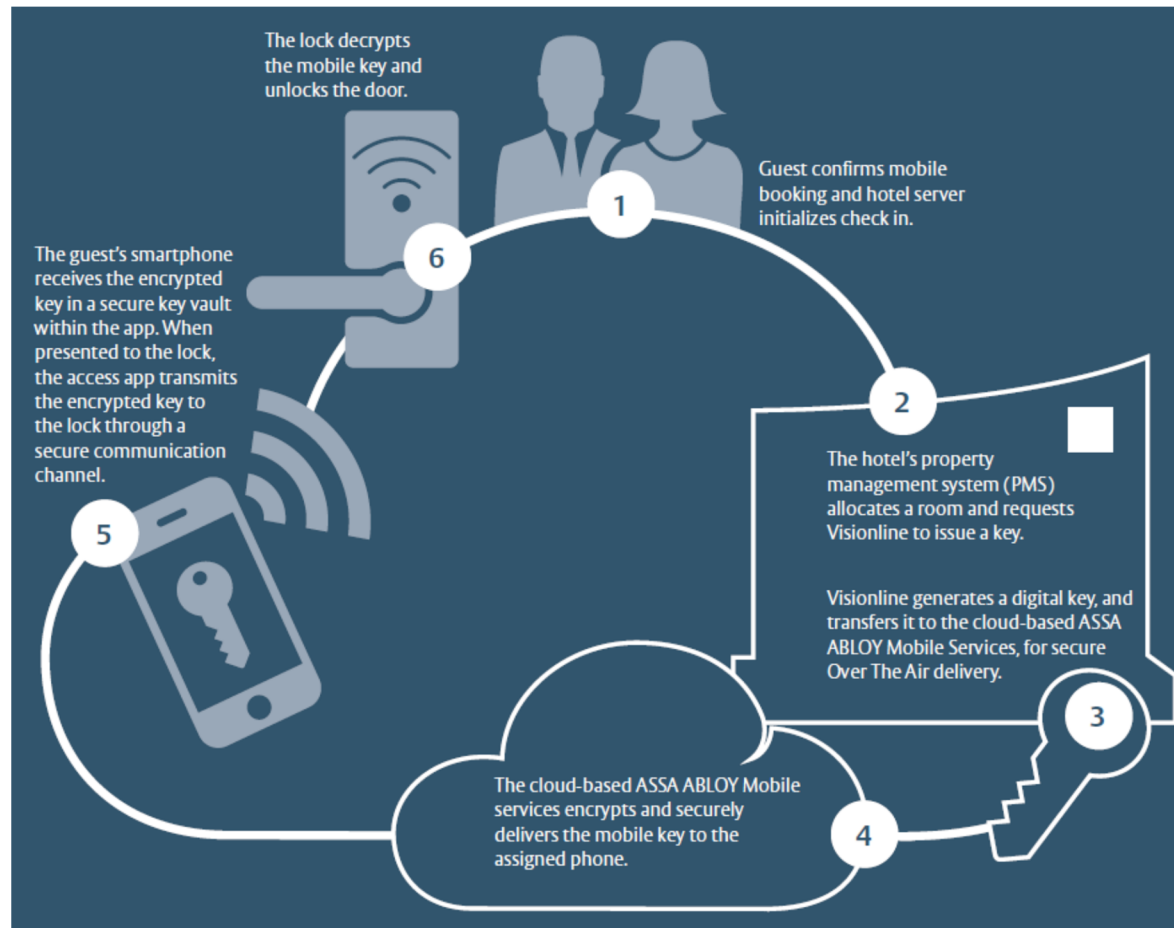
<https://www.assaabloyglobalsolutions.com/en/hospitality-solutions>

Claim 28



<https://www.assaabloyglobalsolutions.com/en/hospitality-solutions>

Claim 28

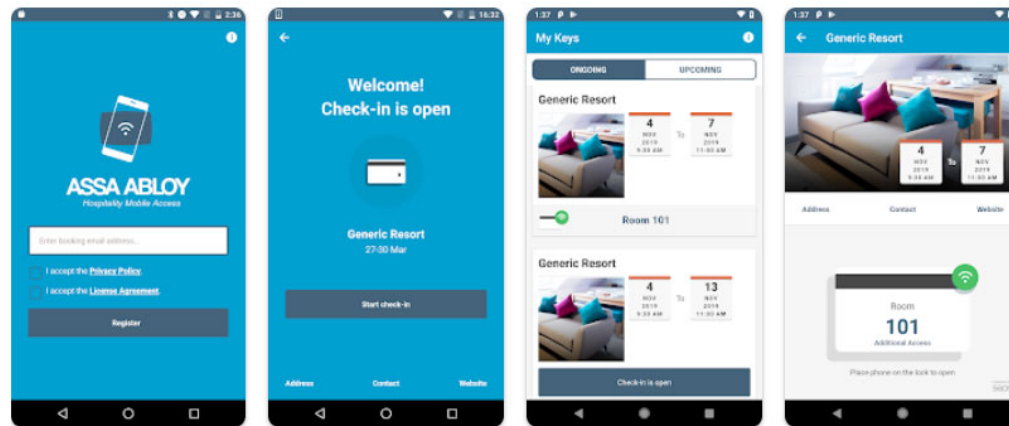


Mobile Access Brochure, p. 9.

Claim 29

29. The access control system of claim 28, wherein the wireless LAN protocol comprises Wi-Fi.

ASSA's system includes, uses (and ASSA instructs end users to use), and/or practices each element of Claim 28 and system of claim 28, wherein the wireless LAN protocol comprises Wi-Fi.



About this app →

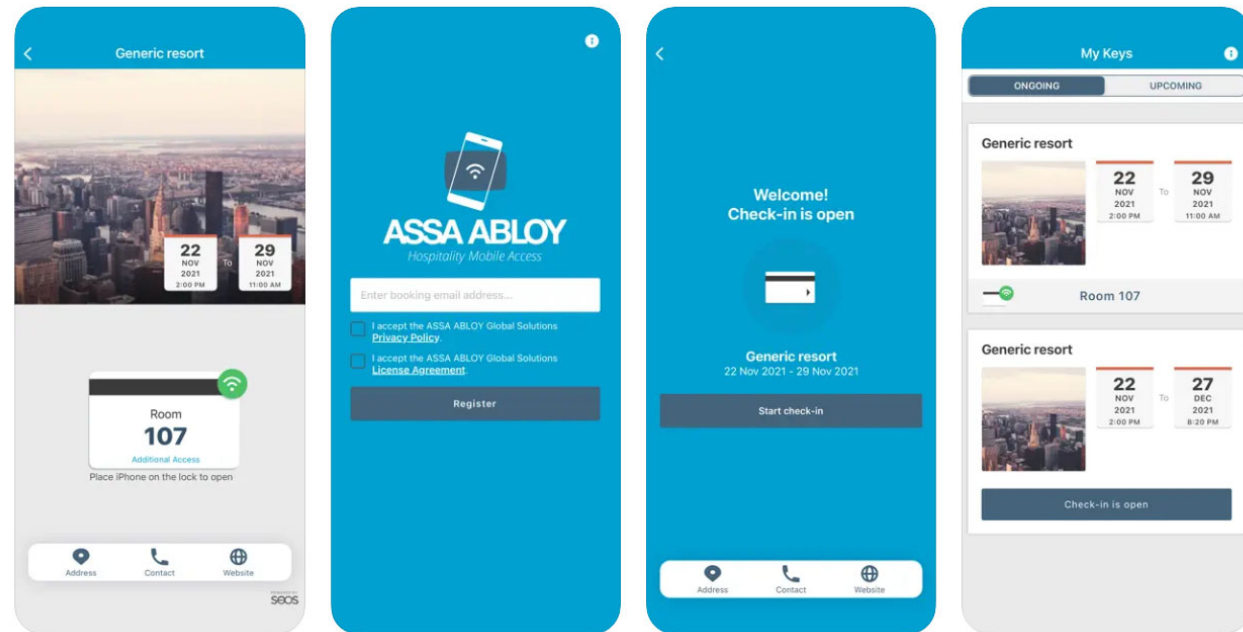
With ASSA ABLOY Hospitality Mobile Access you can check in to your hotel room before you arrive and receive your room key direct to your phone. When you arrive at the hotel, go straight to your room and open the door by holding your phone up against the lock. Your hotel key is securely delivered and stored inside your device and you don't need to worry about a keycard.

ASSA ABLOY Hospitality Mobile Access is available at select hotels around the world.

...
https://play.google.com/store/apps/details?id=com.assaabloy.hospitality.mobileaccess.hospitalitymobileaccess&hl=en_US&gl=US

Claim 29

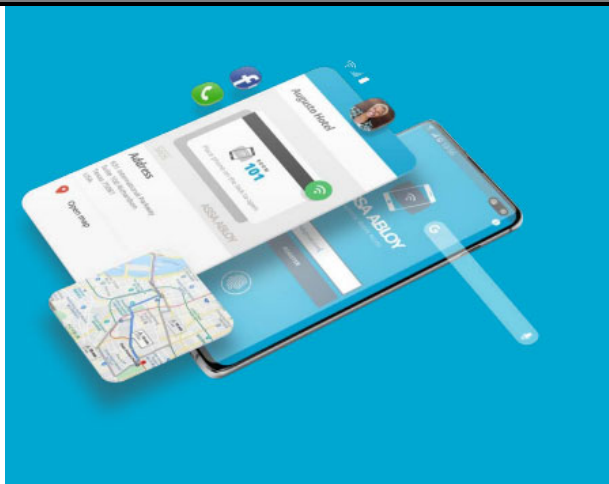
Screenshots iPad iPhone



<https://apps.apple.com/us/app/hospitality-mobile-access/id1017290566?platform=iphone>

Claim 29	
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Claim 29



Unique User Experience

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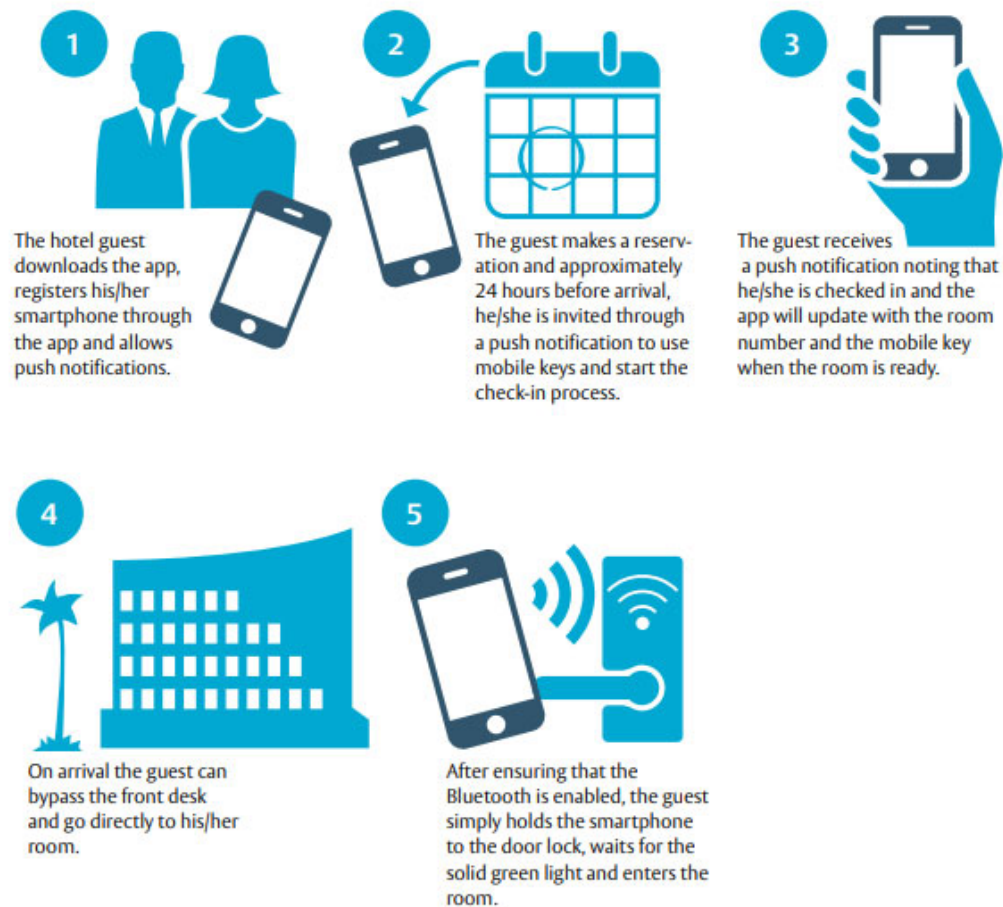
<https://www.assaabloyglobalsolutions.com/en/hospitality-solutions>

How It Works?

- 1 Download the application.
- 2 Make the reservation.
- 3 Check into the room.
- 4 Bypass frontdesk upon arrival and go to the room.
- 5 Open door with the use of mobile application / mobile key.

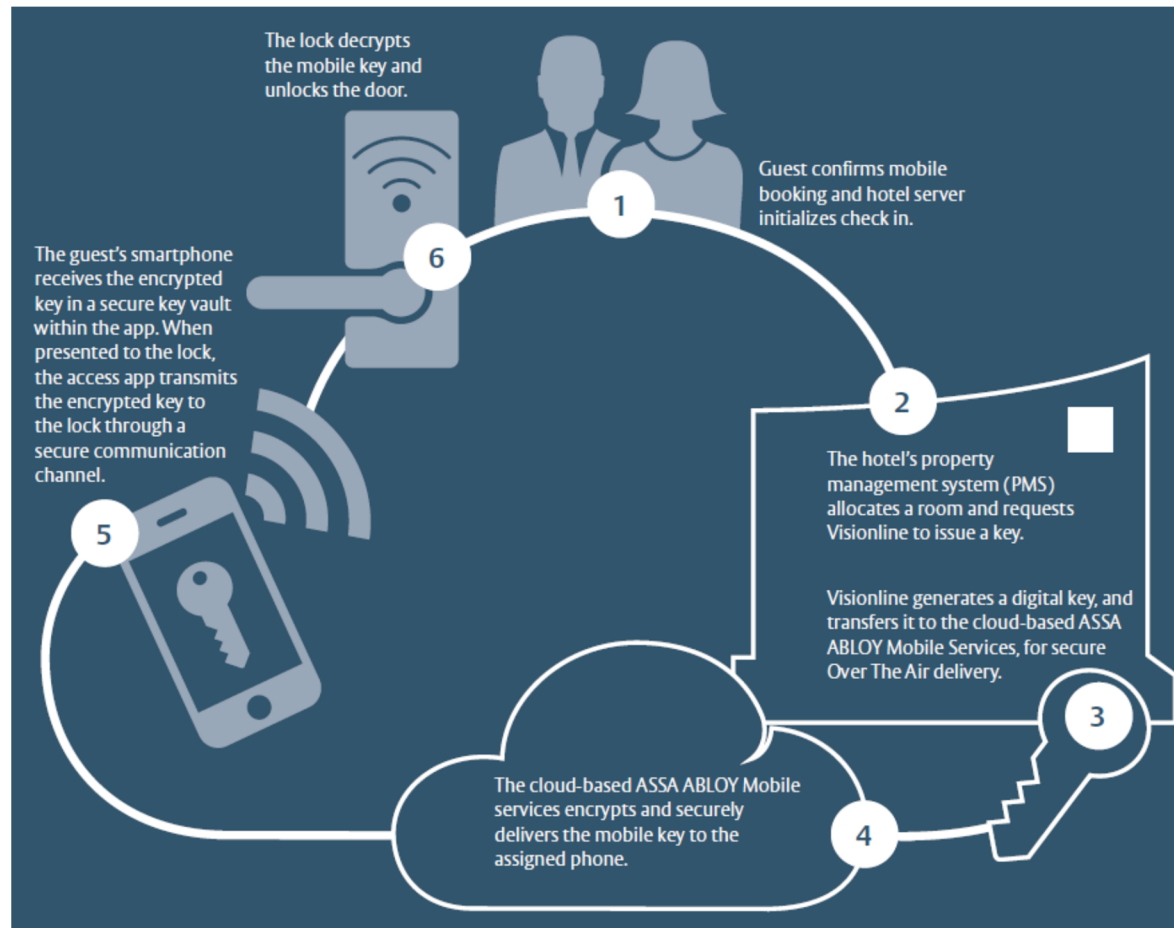
<https://www.assaabloyglobalsolutions.com/en/hospitality-solutions>

Claim 29



<https://www.assaabloyglobalsolutions.com/en/hospitality-solutions>

Claim 29

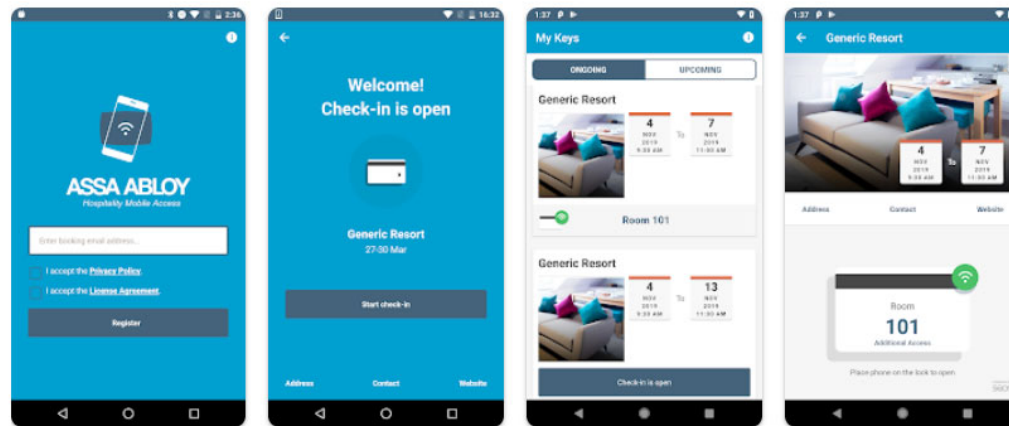


Mobile Access Brochure, p. 9.

Claim 30

30. The access control system of claim 26, wherein the second communication protocol comprises a short-range wireless protocol.

ASSA's system includes, uses (and ASSA instructs end users to use), and/or practices each element of Claim 26 and wherein the second communication protocol comprises a short-range wireless protocol.



About this app →

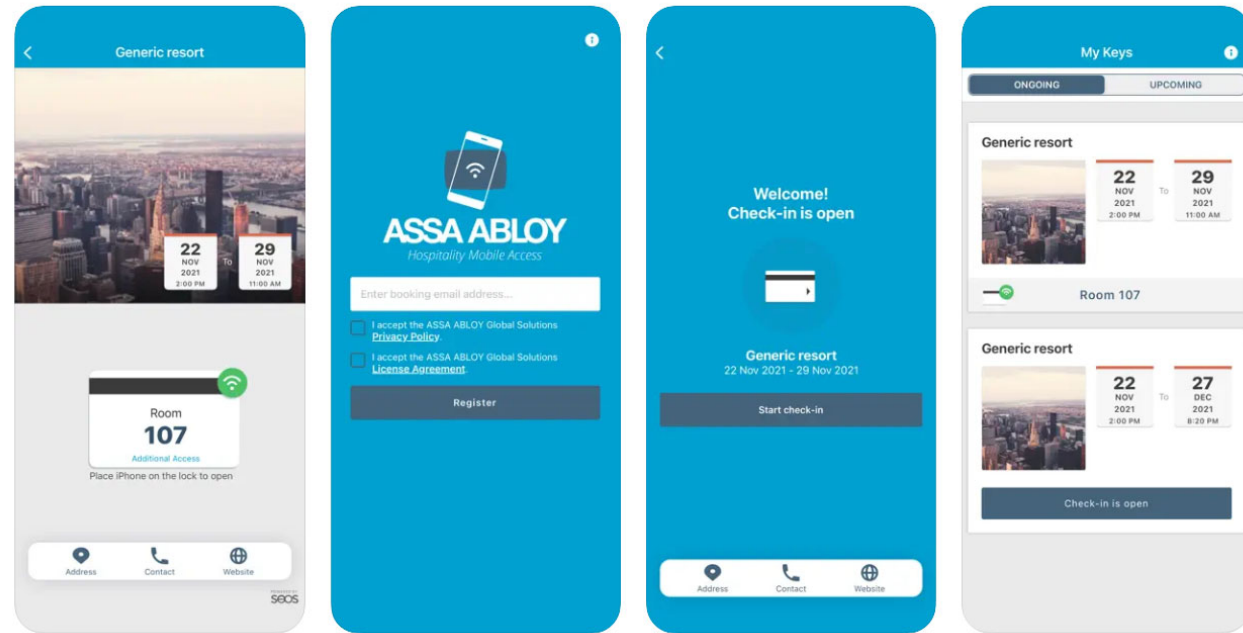
With ASSA ABLOY Hospitality Mobile Access you can check in to your hotel room before you arrive and receive your room key direct to your phone. When you arrive at the hotel, go straight to your room and open the door by holding your phone up against the lock. Your hotel key is securely delivered and stored inside your device and you don't need to worry about a keycard.

ASSA ABLOY Hospitality Mobile Access is available at select hotels around the world.

...
https://play.google.com/store/apps/details?id=com.assaabloy.hospitality.mobileaccess.hospitalitymobileaccess&hl=en_US&gl=US

Claim 30

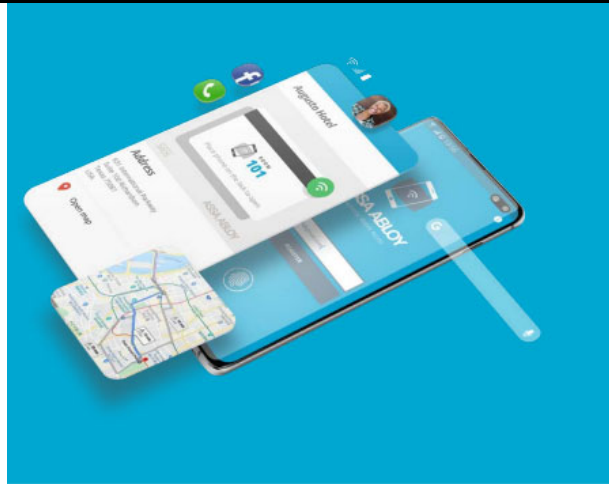
Screenshots iPad iPhone



<https://apps.apple.com/us/app/hospitality-mobile-access/id1017290566?platform=iphone>

Claim 30	
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Claim 30



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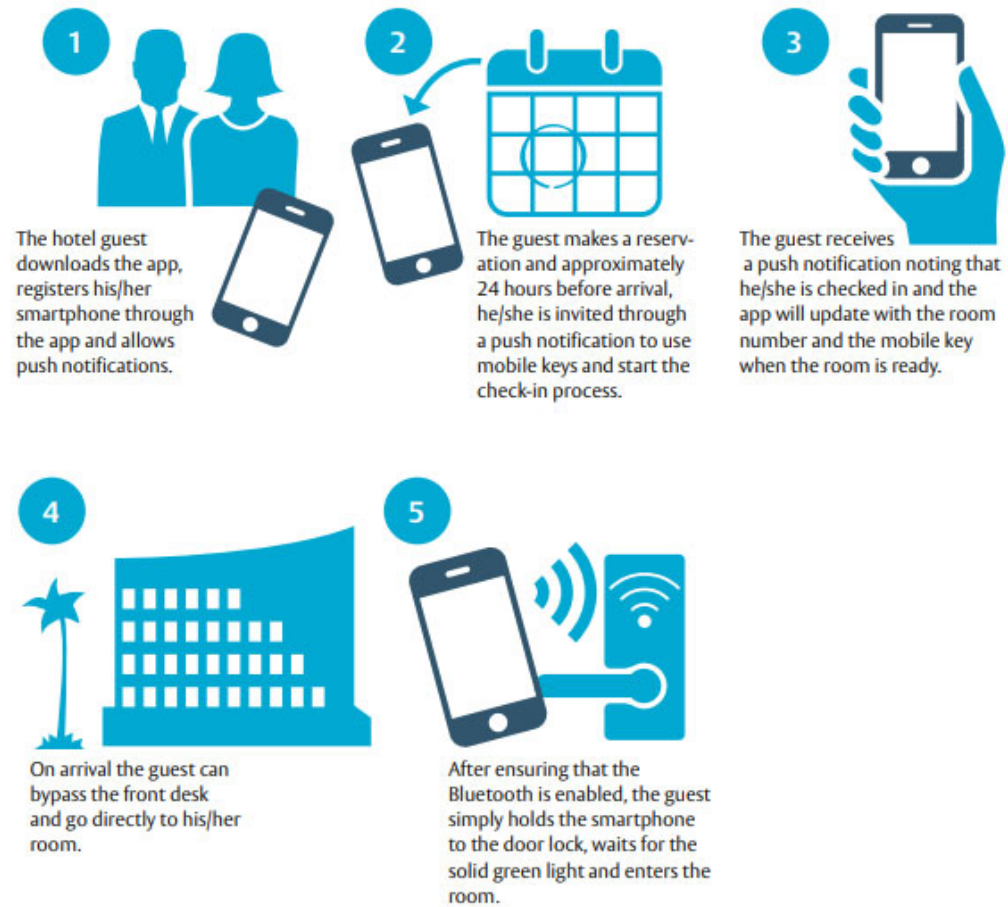
<https://www.assaabloyglobalsolutions.com/en/hospitality-solutions>

How It Works?

- 1 Download the application.
- 2 Make the reservation.
- 3 Check into the room.
- 4 Bypass frontdesk upon arrival and go to the room.
- 5 Open door with the use of mobile application / mobile key.

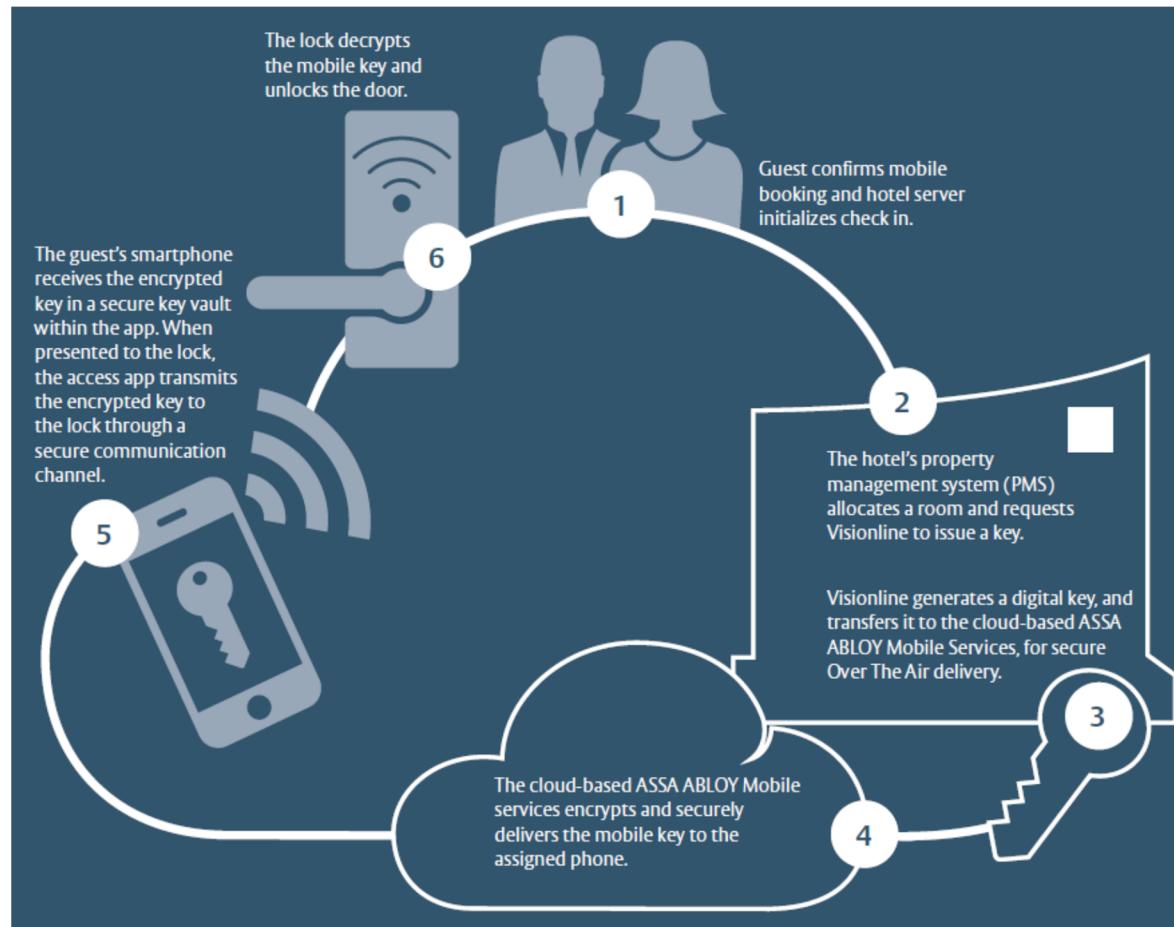
<https://www.assaabloyglobalsolutions.com/en/hospitality-solutions>

Claim 30



<https://www.assaabloyglobalsolutions.com/en/hospitality-solutions>

Claim 30

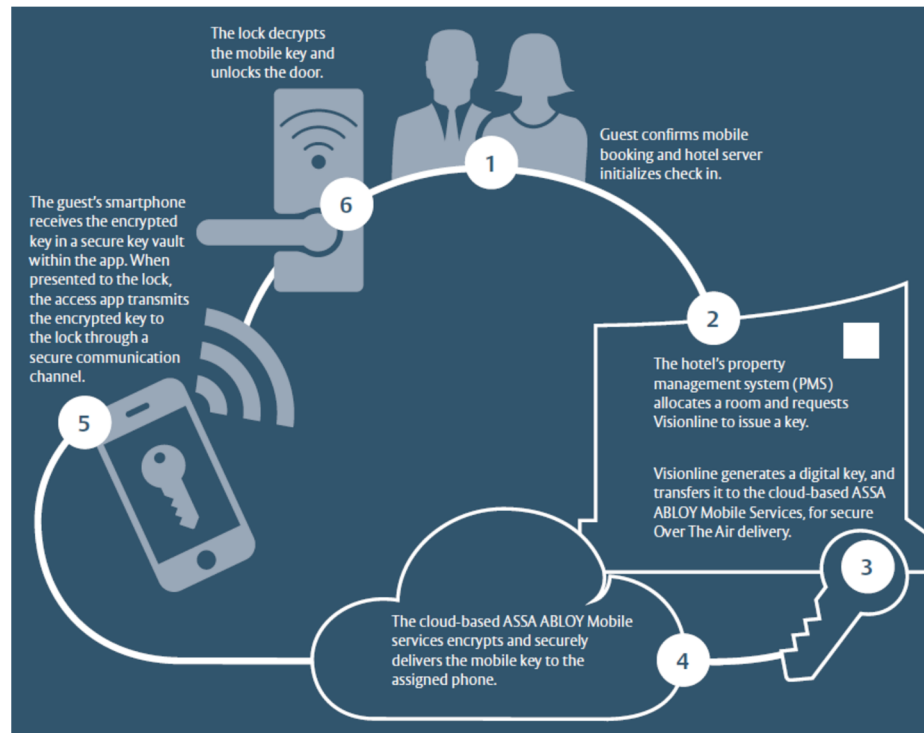


Mobile Access Brochure, p. 9.

Claim 31

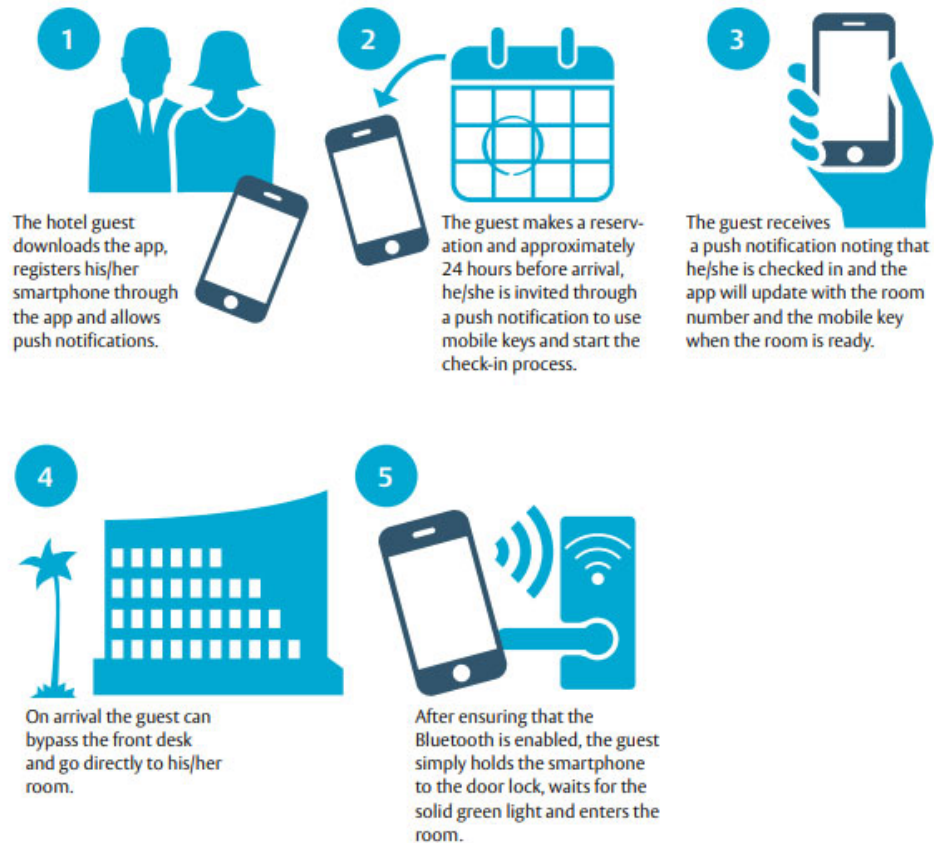
31. The access control system of claim 30, wherein the short-range wireless protocol comprises Bluetooth.

ASSA's system includes, uses (and ASSA instructs end users to use), and/or practices each element of Claim 30 and wherein the short-range wireless protocol comprises Bluetooth.



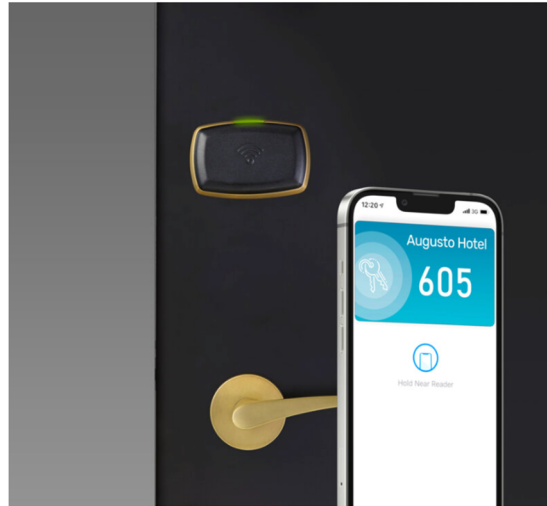
Mobile Access Brochure, p. 9.

Claim 31



<https://www.assaabloyglobalsolutions.com/en/hospitality-solutions>

Claim 31



Step 3: Activate Mobile Access

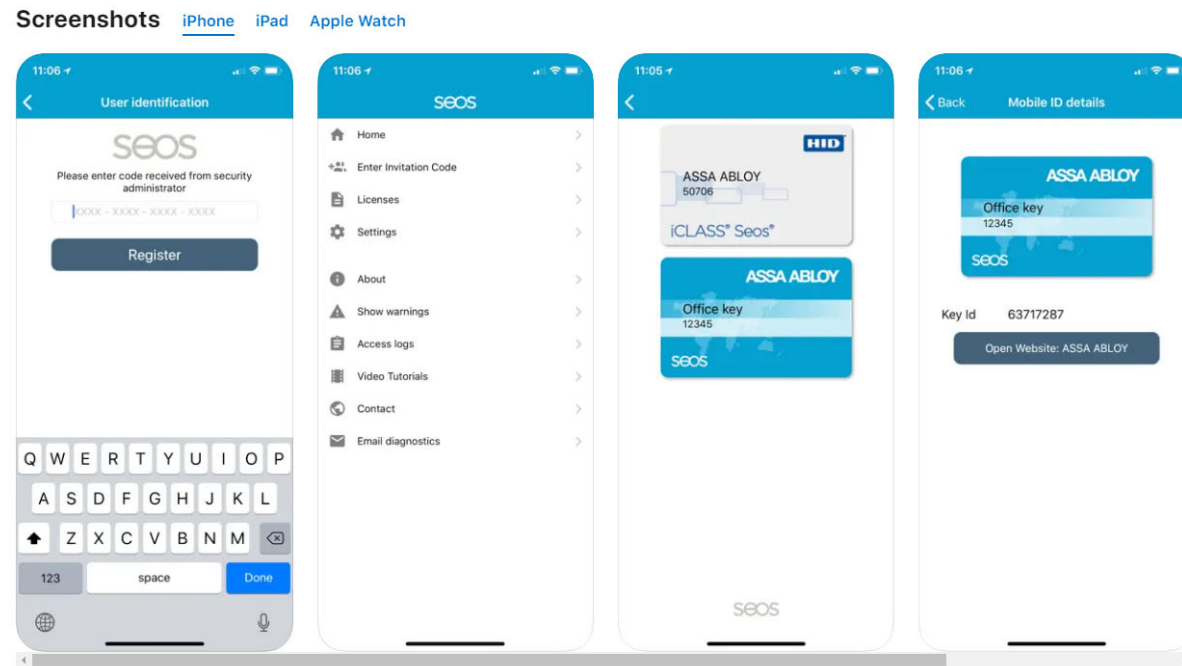
Without replacing existing hardware and with the addition of a Bluetooth Low Energy (BLE) reader, your property and guests can seamlessly begin to enjoy the contactless benefits of the technology.

<https://www.assaabloyglobalsolutions.com/en/hospitality-solutions/mobile-access-for-hospitality/rfid-upgrade>

Claim 32

32. The access control system of claim 26, wherein the second communication protocol comprises a wireless LAN protocol.

ASSA's system includes, uses (and ASSA instructs end users to use), and/or practices each element of Claim 26 and wherein the second communication protocol comprises a wireless LAN protocol.

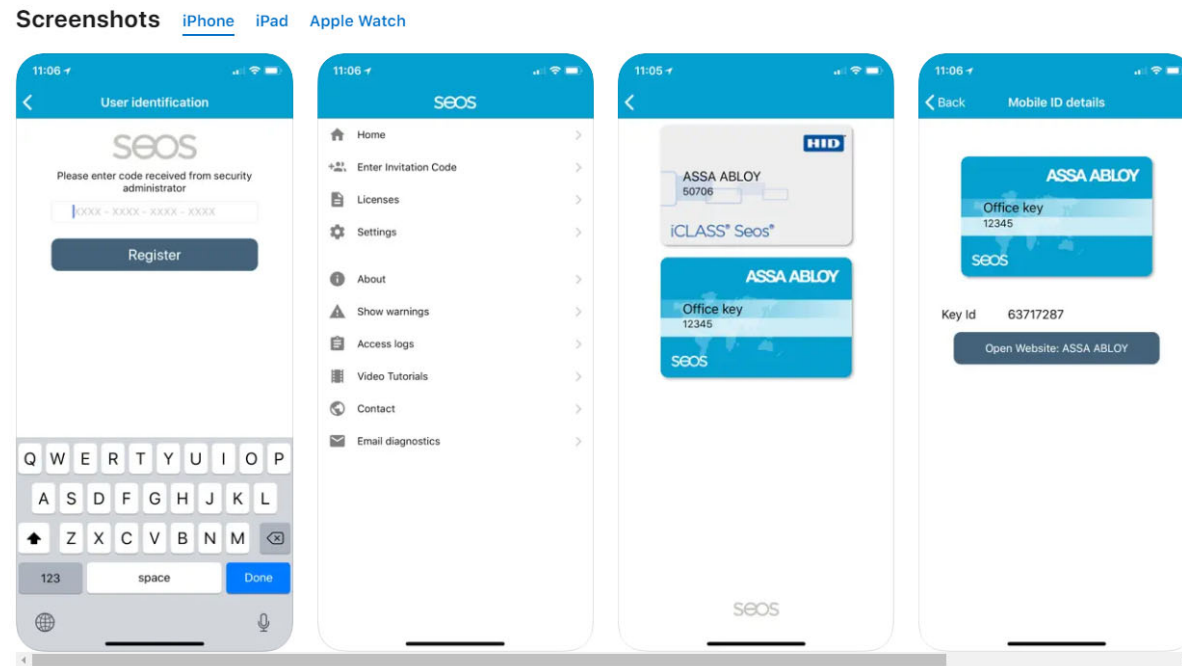


<https://apps.apple.com/us/app/assa-abloy-mobile-access/id793869814>

Claim 33

33. The access control system of claim 32, wherein the wireless LAN protocol comprises Wi-Fi.

ASSA's system includes, uses (and ASSA instructs end users to use), and/or practices each element of Claim 32 and wherein the wireless LAN protocol comprises Wi-Fi.

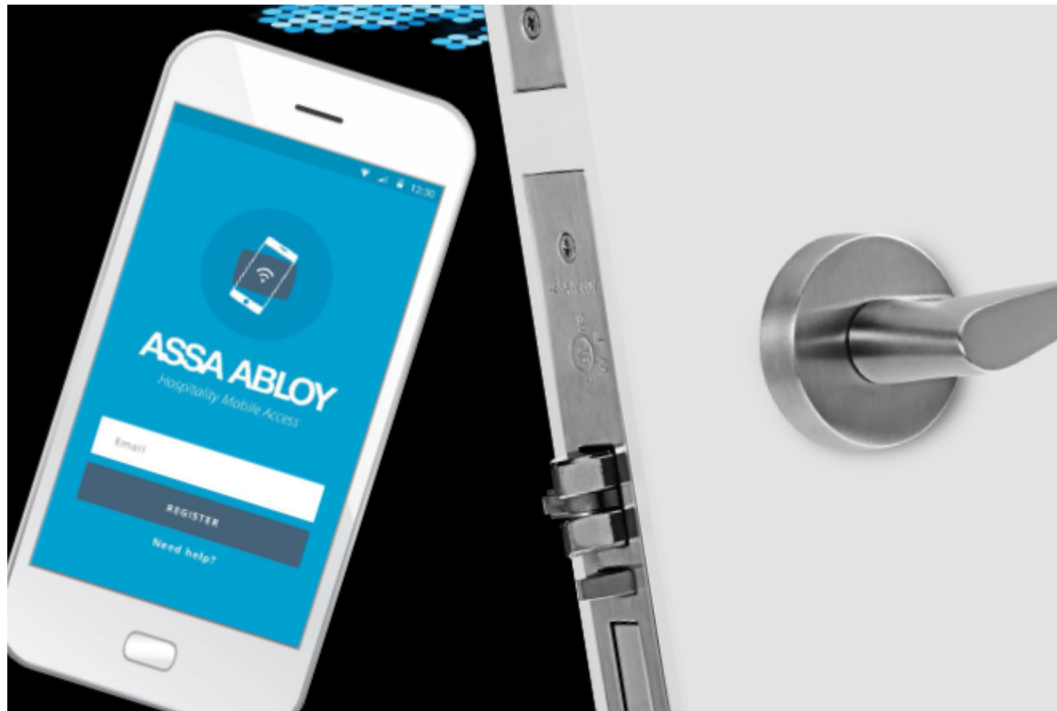


<https://apps.apple.com/us/app/assa-abloy-mobile-access/id793869814>

Claim 34

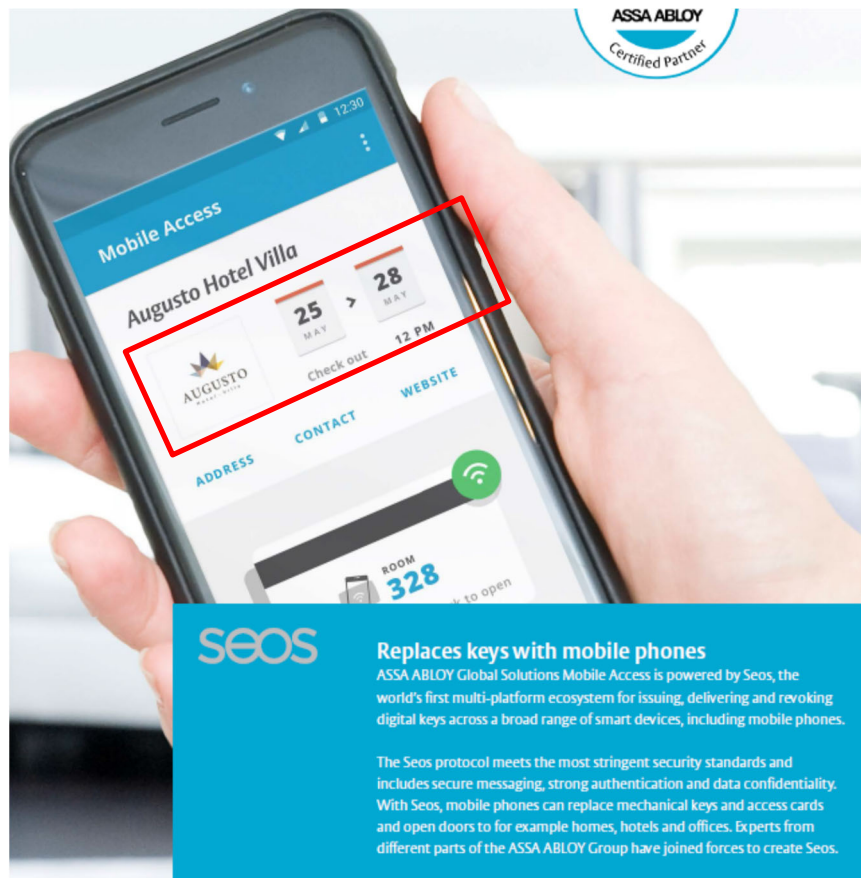
34. The access control system of claim 26, wherein the application automatically connects to the access device via the second communication protocol as the portable terminal approaches the access device.

ASSA's system includes, uses (and ASSA instructs end users to use), and/or practices each element of Claim 26 and wherein the application automatically connects to the access device via the second communication protocol as the portable terminal approaches the access device.



ASSA ABLOY Mobile Access Solutions Brochure, p. 1 (the "Mobile Access Brochure").

Claim 34



Mobile Access Brochure, p. 5.

Claim 34	
	 The guest receives a push notification noting that he/she is checked in and the <u>app will update with the room number and the mobile key when the room is ready.</u> Mobile Access Brochure, p. 6.

Claim 34

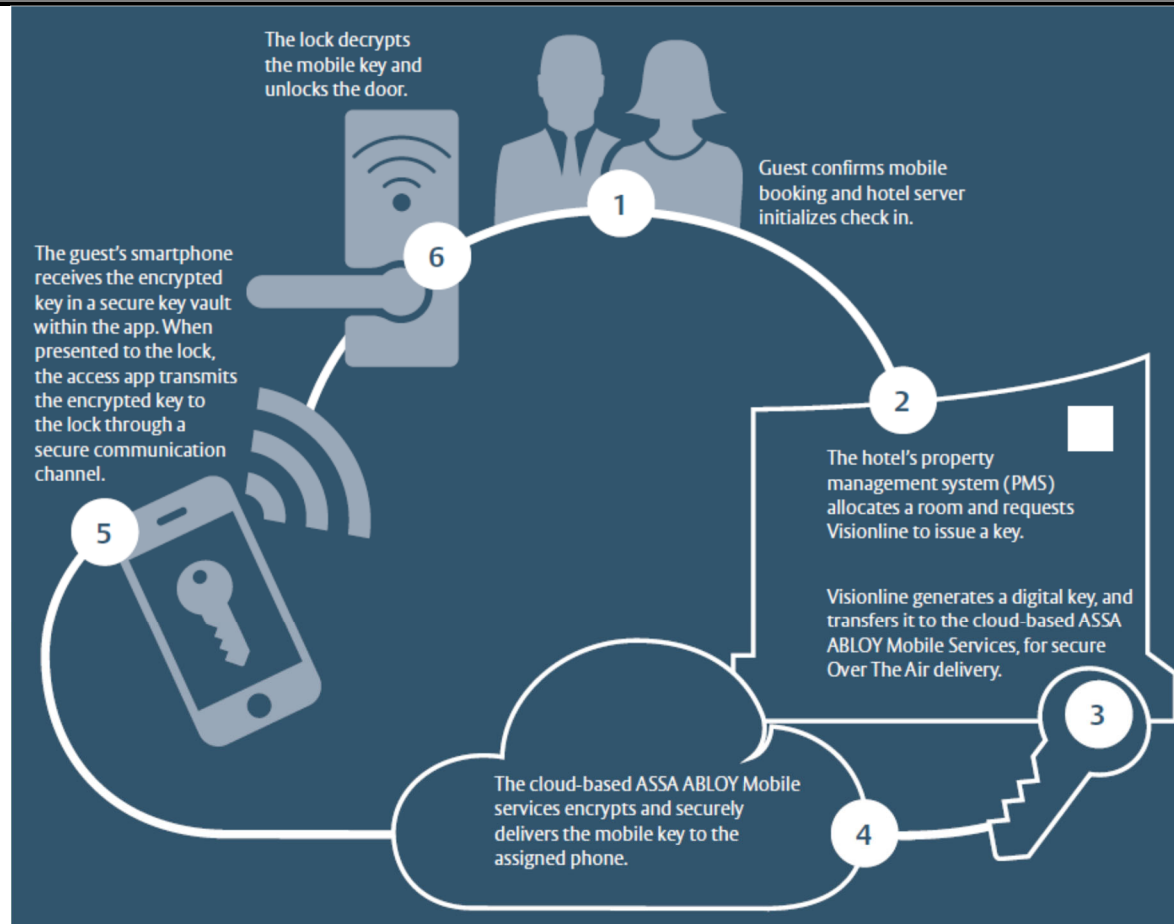
HOW IT WORKS - PROPERTY PERSPECTIVE



<https://www.assaabloyglobalsolutions.com/downloads/product-sheets/mobile-access/Mobile-Access-App-Product-Sheet-EN.pdf>

Claim 35	
35. The access control system of claim 26, wherein the reservation certificate is encrypted.	Upon information and belief, ASSA's access control system includes and/or uses (and ASSA instructs end users to use) an access device wherein the access device comprises a reservation certificate where at least a portion of the reservation certificate is encrypted. https://www.assaabloy.com/tr/en/stories/blog/assa-abloy-mobile-access-technology; <i>see also</i> https://www.assaabloyglobalsolutions.com/en/hospitality-solutions/mobile-access-for-hospitality/rfid-upgrade. Upon information and belief, ASSA's access control device comprises reservation certificate that is encrypted using public key cryptography, which is currently the most common form of security for remote lock doors and secure communication between electronic devices.

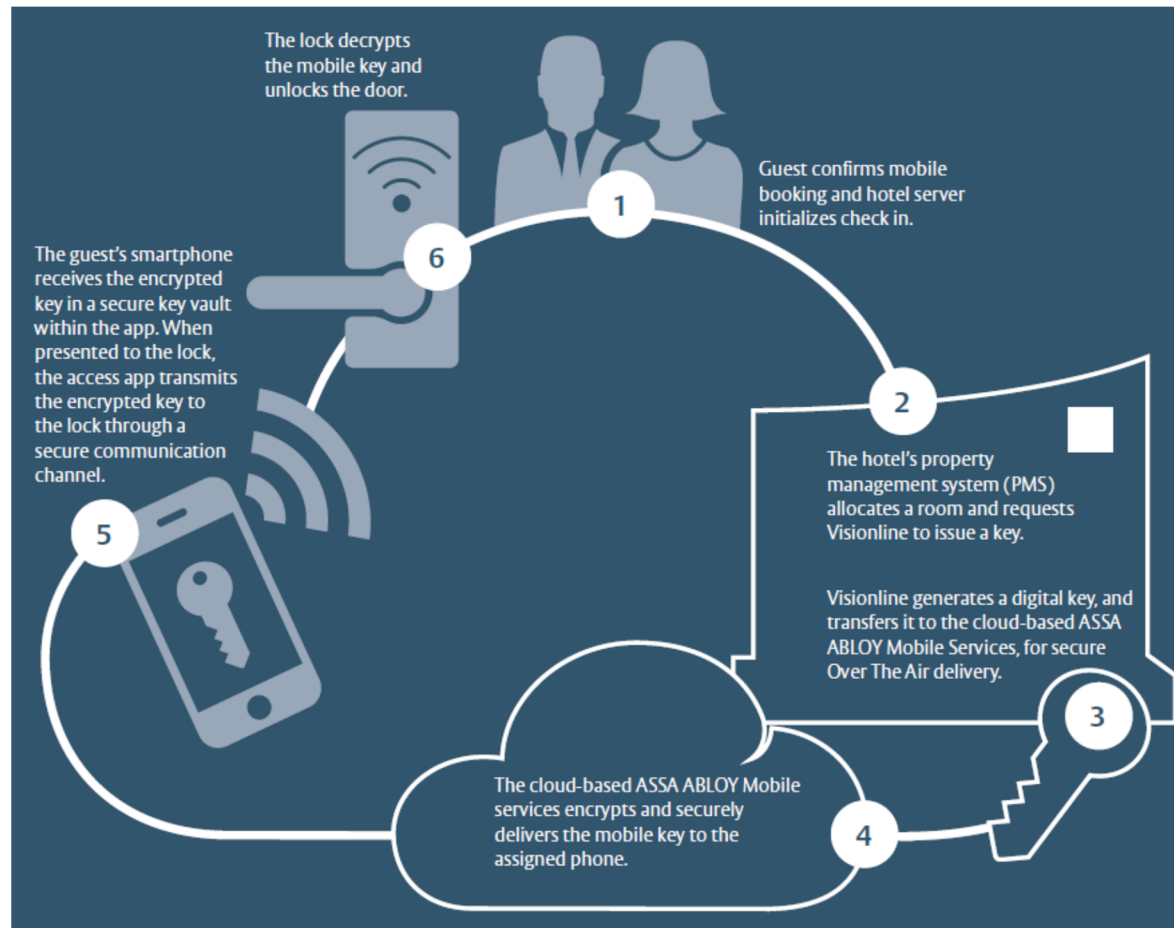
Claim 35



Mobile Access Brochure, p. 9.

Claim 36	
36. The access control system of claim 35, wherein the encrypted reservation certificate is decrypted by the access device.	Upon information and belief, ASSA's access control system includes and/or uses (and ASSA instructs end users to use) wherein the encrypted reservation certificate is decrypted by the access device. https://www.assaabloy.com/tr/en/stories/blog/assa-abloy-mobile-access-technology; <i>see also</i> https://www.assaabloyglobalsolutions.com/en/hospitality-solutions/mobile-access-for-hospitality/rfid-upgrade. Upon information and belief, ASSA's access device comprises reservation certificate that is encrypted using public key cryptography, which is currently the most common form of security for remote lock doors and secure communication between electronic devices. In order to employ public key cryptography, ASSA's access device must necessarily decrypt the encrypted reservation certificate.

Claim 36



Mobile Access Brochure, p. 9.