

Evaluation of the world's first pilot using NFC phones for check-in and hotel room keys

ASSA ABLOY

The global leader in door opening solutions.

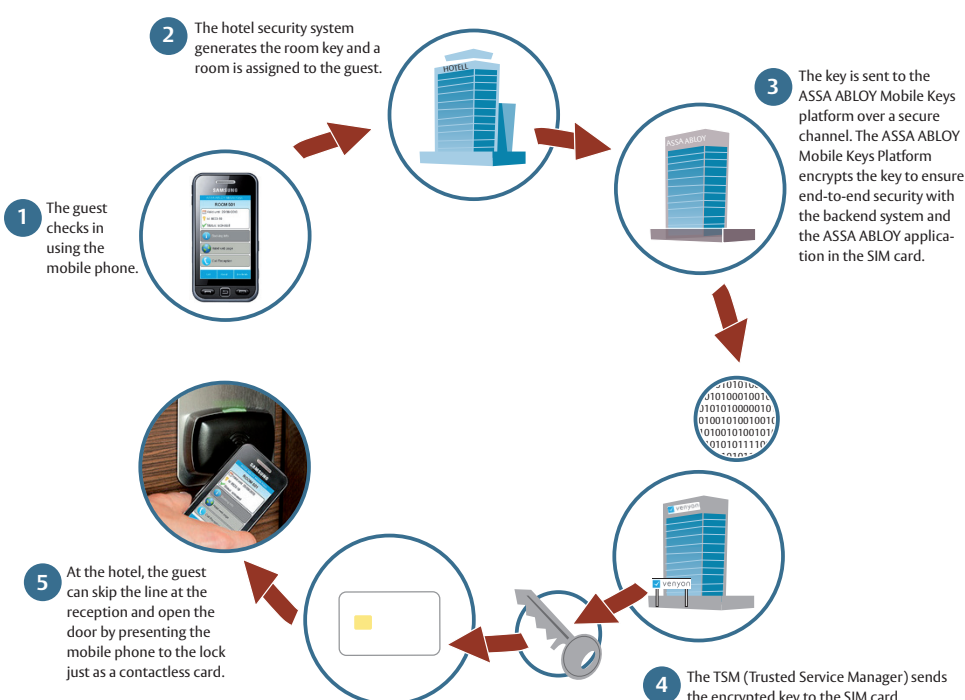
The world's first pilot using NFC-enabled mobile phones to check in and out of hotels replacing hotel room keys is now completed. The pilot shows great potential for mobile keys. This report summarizes the survey results conducted with the participating hotel guests and key learnings from the project.

The pilot

ASSA ABLOY, Choice Hotels Scandinavia, TeliaSonera, VingCard Elsafe and G&D have completed a joint pilot to replace hotel room keys with NFC-enabled mobile phones. During eight months, 28 hotel loyalty guests with an average of 17 hotel stays have evaluated the performance and user experience of a mobile keys application at the Clarion Hotels Stockholm, Sweden.

The guests made reservations using their regular channels and on the day of arrival, they received a check-in invitation sent to them via SMS. By a link in the check-in invitation the guests accessed an online application where they checked in and received a hotel room number. When check-in was completed, a digital hotel room key was sent to the NFC-enabled mobile phone. Upon arrival at the hotel, the guests could skip the check-in line, and go directly to their room and open the door by holding the mobile phone up against the door lock. Check out was also managed through the mobile keys application and the digital hotel room keys were deactivated when check out was completed.

The five companies that participated in the pilot each brought its specific expertise. The guests were equipped with Samsung S5230 NFC enabled mobile phones and the ASSA ABLOY Mobile Keys application was wirelessly (Over-the-Air) loaded by the G&D TSM to TeliaSonera controlled SIM cards. The SIM cards had support for Mifare Classic 1K and were provided by Gemalto. The NFC enabled locks at Clarion Hotel Stockholm were provided by VingCard Elsafe.



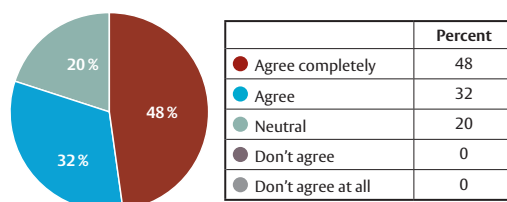
Survey

The 28 hotel loyalty guests participating in the survey stayed at the hotel frequently during the pilot period. With an average of 17 hotel stays they used the application repeatedly. This gave the familiarity with the service needed to give valuable feedback on the performance and user experience. A survey was conducted where the participants rated different aspects of the pilot and also gave open answers and suggestions on how to improve the service.

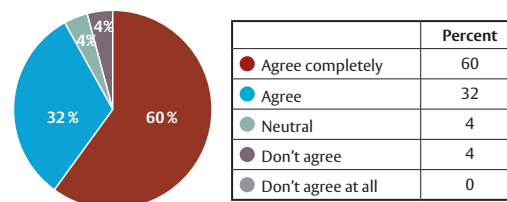
Nine out of 10 saved time

The survey shows that all guests in the pilot much appreciated not having to wait in line at the hotel reception. About 90 percent of the participating guests stated that they saved time not having to check in at the reception and 60 percent said that they saved 10 minutes or more. Nine out of 10 of the loyalty guests would use mobile keys for their hotel stays if the service was available today and their phone supported it.

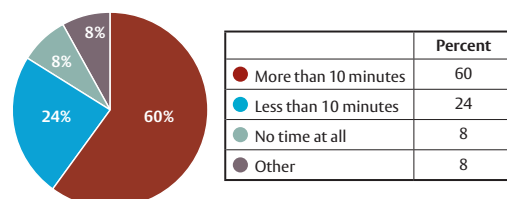
The mobile key application made my hotel stay more comfortable.



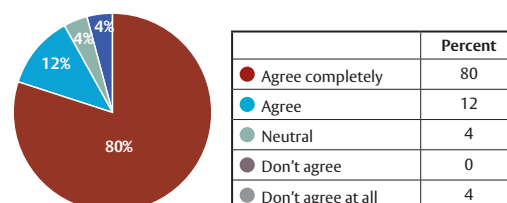
I saved time not having to stand in line to check in.



How much time do you estimate was saved during your hotel stay by using the mobile keys application in comparison to other hotel stays?



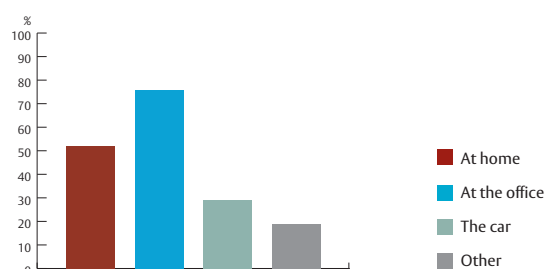
If my mobile phone supported the mobile keys application I would use it.



Positive attitude towards mobile keys

The survey shows a general positive attitude towards mobile keys. Five out of 10 guests would like to use mobile keys to open the door to their house with their mobile phone. Even more, 75 percent of the participants want to open their office door using their mobile phone. A little fewer, one out of four, were positive to using mobile keys to open car doors.

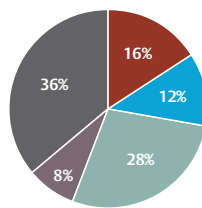
Would you use mobile keys to open other kinds of doors?



NFC compatible mobile phones

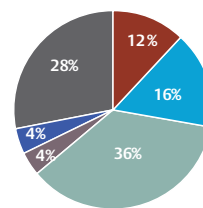
Almost all hotel guests that participated in the pilot are smart phone users. In the survey they were asked if they thought that they would choose a mobile phone that supports this kind of application the next time they bought a new mobile. One third replied that they would choose a mobile phone with support for mobile keys the next time they buy a mobile phone. Two thirds replied that they did not know or were neutral to the question. The participants did not change their response when asked if it would make a difference if the phone also supported payments and other similar applications.

Next time I buy a mobile phone I will most likely choose one that supports this kind of application.



	Percent
Agree completely	16
Agree	12
Neutral	28
Don't agree	8
Don't agree at all	0
Don't know	36

Next time I buy a mobile phone I will most likely choose one that supports this kind of application, if it also supports contactless payments and other similar applications.



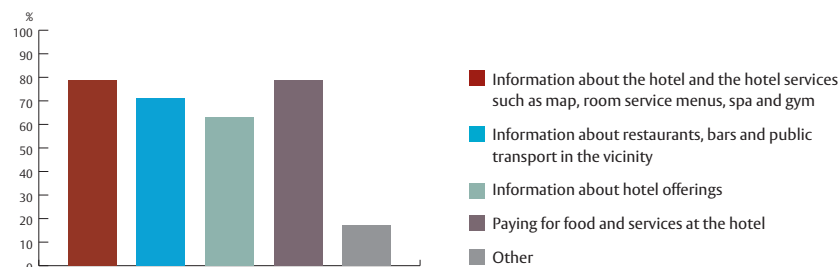
	Percent
Agree completely	12
Agree	16
Neutral	36
Don't agree	4
Don't agree at all	4
Don't know	28

Opportunities for hotels

When asked what other NFC applications they thought would be appreciated by hotel guests, 80 percent replied paying for food, drink and hotel services. The survey also showed that the guests were positive to getting useful information directly through the mobile keys application. Eight out of 10 believed receiving information about the hotel and the hotel services such as map, room service menus, the gym and spa service to be a good idea. Seventy percent were positive to receiving information about restaurants, bars and public transport available via the application.

More than half of the participants, 60 percent, were positive to getting information about hotel offerings through the mobile keys application. This shows that the application is a great functionality to add to hotel loyalty applications to get a closer relationship with the guests. A few of the participants in the pilot however stated that they missed the social interaction with the hotel staff. This suggests that the interacting the staff is a positive part of the hotel experience, waiting in line in the reception on the other hand is not.

What other services connected to the application do you think would be successful?



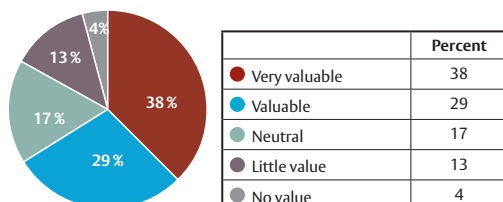
Learnings

The NFC ecosystem as well as the NFC technology is still under development. The pilot has experienced some technical challenges in getting all the parts of the ecosystem to work seamlessly. It has been an important learning experience for all companies involved.

For example the guests had to carry two phones, their regular one and the NFC-enabled phone. Problems were also experienced in sending the mobile keys to the SIM cards in the beginning of the pilot. The problems were identified and the systems were fine-tuned and in the end of the pilot the service worked as expected.

Despite technical challenges and the fact that the guests had to carry an additional phone, 70 percent found it valuable to open the hotel door with the mobile phone.

How valuable was it to you to be able to open the hotel door with the mobile phone not needing an ordinary hotel key?



Conclusions

The pilot shows a positive attitude towards mobile keys in general and the possibility to bypass the reception and walk directly to the room was received very positively by the participating hotel guests. Eight out of 10 claimed that the mobile keys application made their hotel stay more pleasant. Almost everybody would use the service if it was available today and their mobile phone supported it.

As one of the guests summarized: "The mobile keys solution is a highly intelligent solution for me staying at hotels frequently in terms of saving time. I can come and go as if it were my own apartment."

About NFC

NFC, Near Field Communication, is a short-range wireless communication technology standard that enables the exchange of data between devices over up to a 10 cm distance. Applications include contactless transactions such as payment and transit ticketing, mobile keys, data transfers including electronic business cards, and access to online digital content.

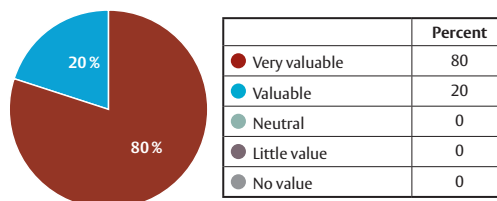
About ASSA ABLOY Mobile Keys

Mobile keys can be sent to NFC enabled phones in a secure way using the ASSA ABLOY Mobile Keys distribution platform. The platform ensures end-to-end security and is applicable for access control and key control in residential, commercial and hotel applications.

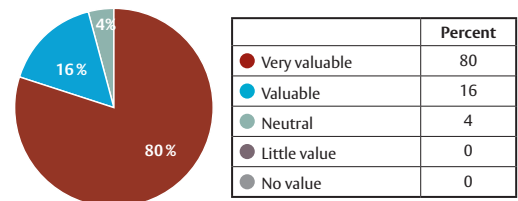
The ASSA ABLOY Mobile Keys application supports multiple keys of different types and features, such as requiring a PIN before the mobile key is activated. Third parties can also integrate mobile keys into their own mobile application using an API from ASSA ABLOY.

Survey graphs

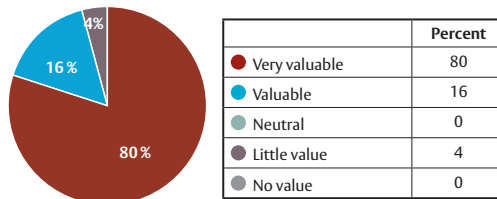
How valuable was it to you to be able to check in with the mobile phone not needing to wait in the reception queue?



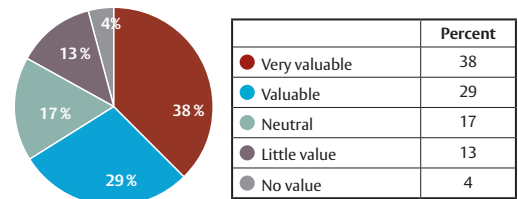
How valuable was it to you to receive the check in confirmation and the key via SMS?



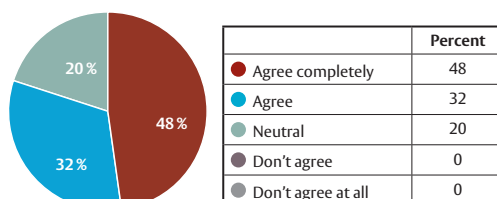
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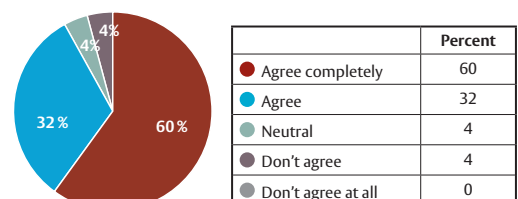
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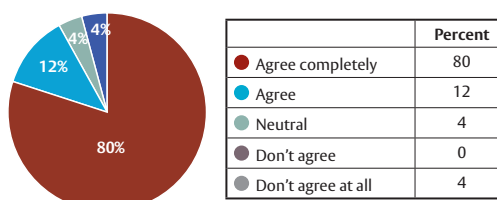
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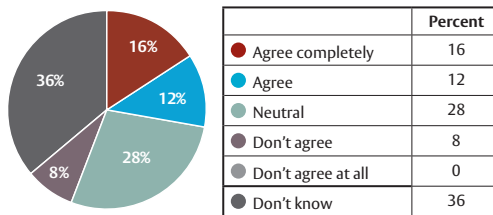
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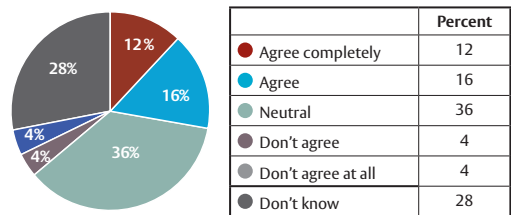
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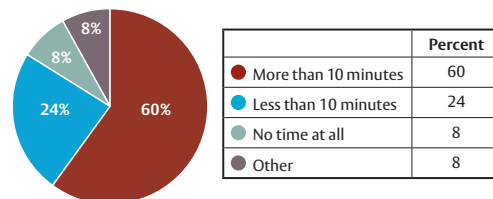
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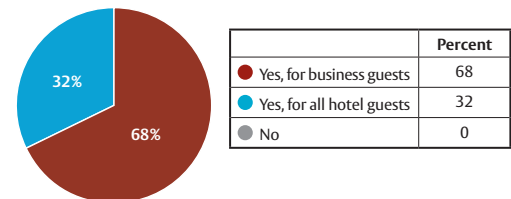
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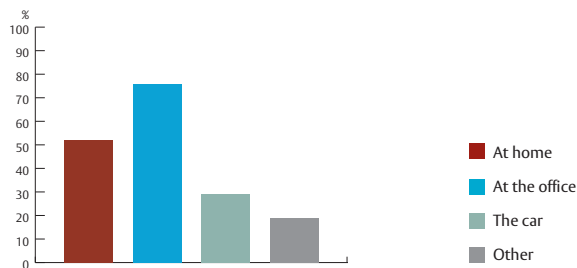
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Do you think the mobile keys application will become a reality?



Would you use mobile keys to open other kinds of doors?



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