

Matthew Burns & Micah Williams

# Secure the bag

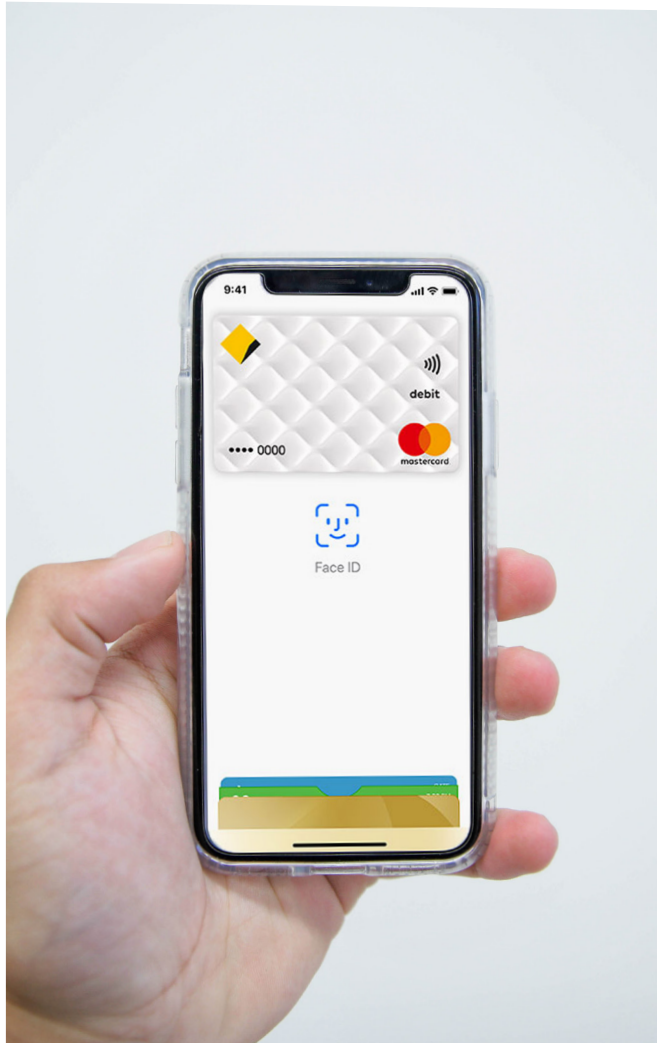
Apple Pay - cashless made effortless.  
But how secure is it?





# Secure the bag

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Apple Pay is a mobile payment and digital wallet solution from Apple. It was released in October 2014 and allows users to make card-less payments in person, in iOS apps and online, as well as allowing person-to-person payments within iMessage. There are various pros and cons associated with the use of Apple Pay including questions of efficiency and security; which will all be explored throughout this article.

The main goal of Apple Pay is to create a faster and more secure method of payment for users. This minimises the fuss of using cards, which can in many cases be faulty and draw out the transaction. In addition to this, Apple promised more secure payments. This revolutionary payment method took the world by storm, with around 383 million users globally (as of 2019). Over recent years it has become the biggest tap-and-pay mobile payment solution, accounting for two out of every three dollars processed through contactless payment systems in the United States (Huh, J. H., Verma, S., Rayala, S. S.

V., Bobba, R. B., Beznosov, K., & Kim, H. 2017). Apple Pay was released alongside the iPhone 6 and iPhone 6 Plus in October 2014. At the time, only select retailers were equipped to process Apple Pay payments. Now, it is supported by over two million retailers worldwide; teaming up with hospitality giants such as McDonald's, Disney, Starbucks, Subway, Expedia and Airbnb. Apple's fiscal report in 2017, revealed a transaction volume growth of 450% annually (Rao, 2017). Now, Apple Pay is available at 20 million locations in more than 20 countries, accounting for an impressive 90% of all contactless transactions around the world (Sparks, 2017). The efficiency of the payment method is one of the main reasons it is so popular. It's as easy as tap and go.

Despite all the advantages and efficiencies that come with Apple Pay, there is quite a large amount of people questioning the security of it. Apple Pay does require a user's fingerprint or facial recognition, making it more difficult to be hacked or

used by someone other than the owner of the device. However, it is how much of the user's data Apple have access to that is in question. There are several unanswered questions similar to this that only Apple know the answer to. Some users have a vague idea of what exactly happens when they use their phone to pay, but this is not necessarily common knowledge. In fact, in a survey conducted by students from Honeywell ACS Labs, the University of Minnesota, Oregon State University, the University of British Columbia and Sungkyunkwan University, 81% of Apple Pay users had very limited knowledge of the mechanisms used. This is fuel for many people's now growing concern over the security of Apple Pay. Fingerprints and facial recognition provide security from other people, but what protects users' information from Apple? In order for Apple Pay to successfully work, Apple need the bank information and card information of each user. But as mentioned above, very few people actually know the intricate mechanisms in place to help secure the information of users, so it is very difficult to

come to an accurate conclusion regarding Apple Pay's security. However, these concerns are not enough to stop people from using the payment method. Studies conducted by students from Honeywell ACS Labs, the University of Minnesota, Oregon State University, the University of British Columbia and Sungkyunkwan University suggest that 59% of people who understood some of the security risks still continued to use Apple Pay.

At this point in time, it is clear that the efficiency and speed that Apple Pay offers outweighs any potential risks that come with it. Apple should look into revealing some of how the payment method works though, as these security concerns are only growing, and may soon outweigh its efficiency.



#### References:

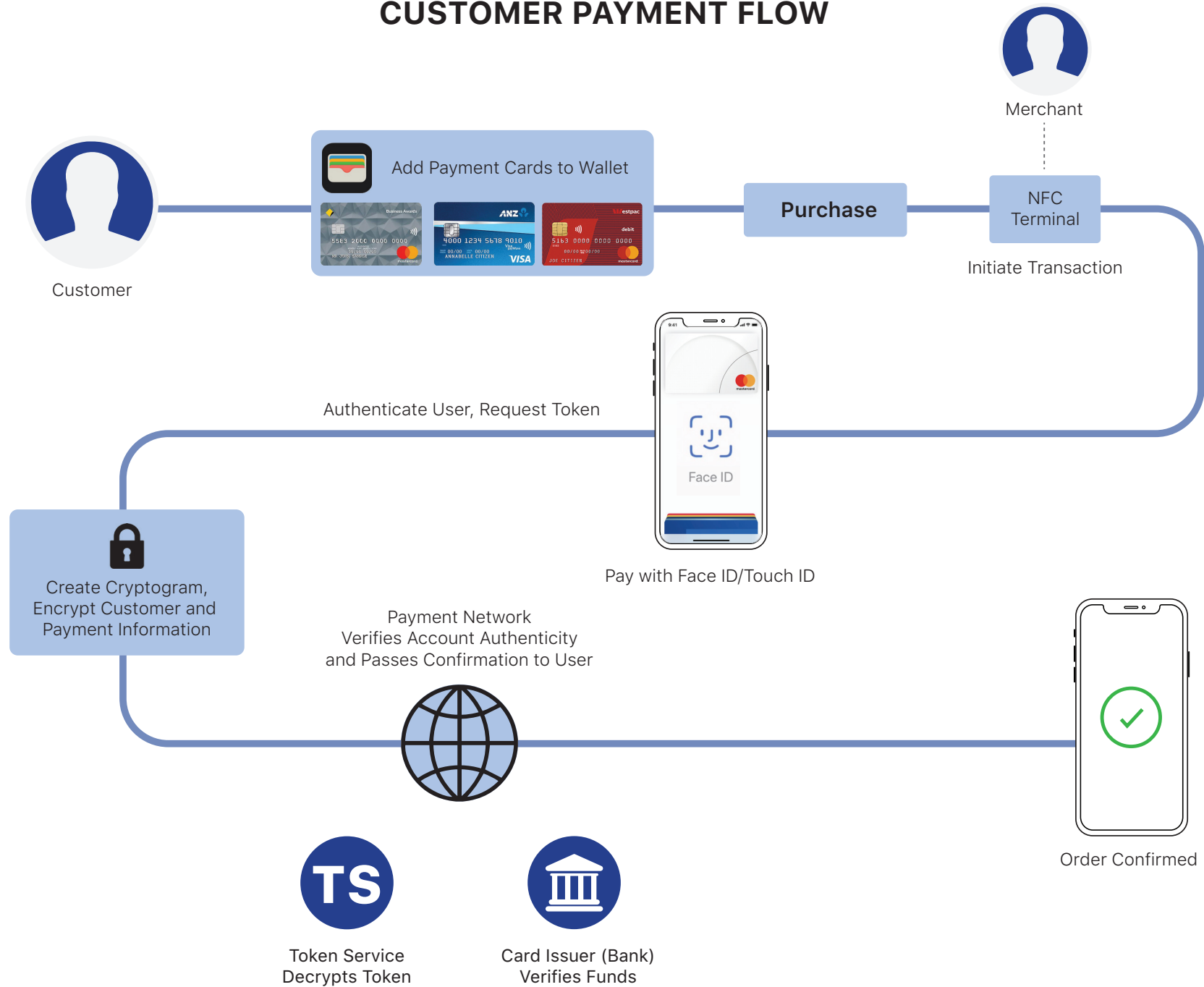
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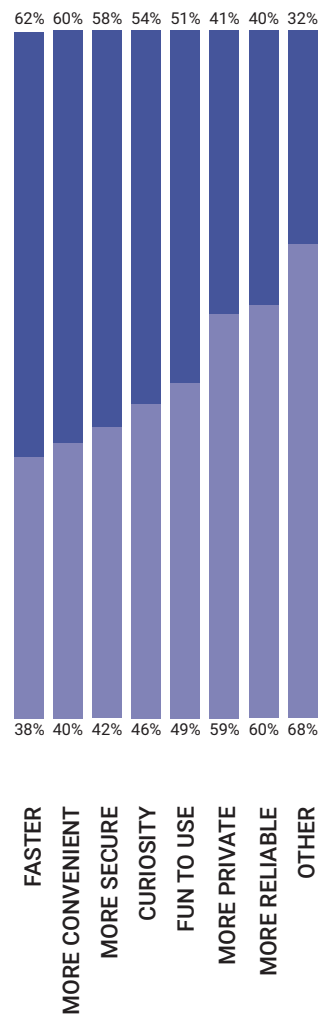
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# CUSTOMER PAYMENT FLOW

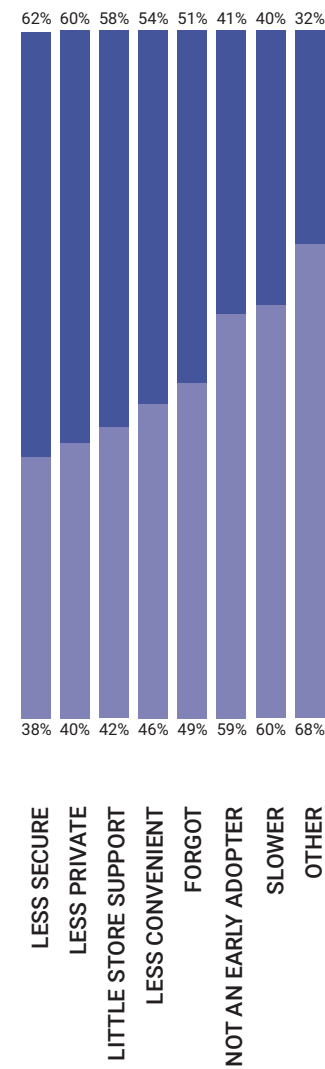


# USING APPLE PAY



ranked as most important response  
as a response

# NOT USING APPLE PAY



ranked as most important response  
as a response

# USERS, NON-USERS AND STOPPED USERS AFTER CORRECTLY ANSWERING SECURITY QUESTIONS

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