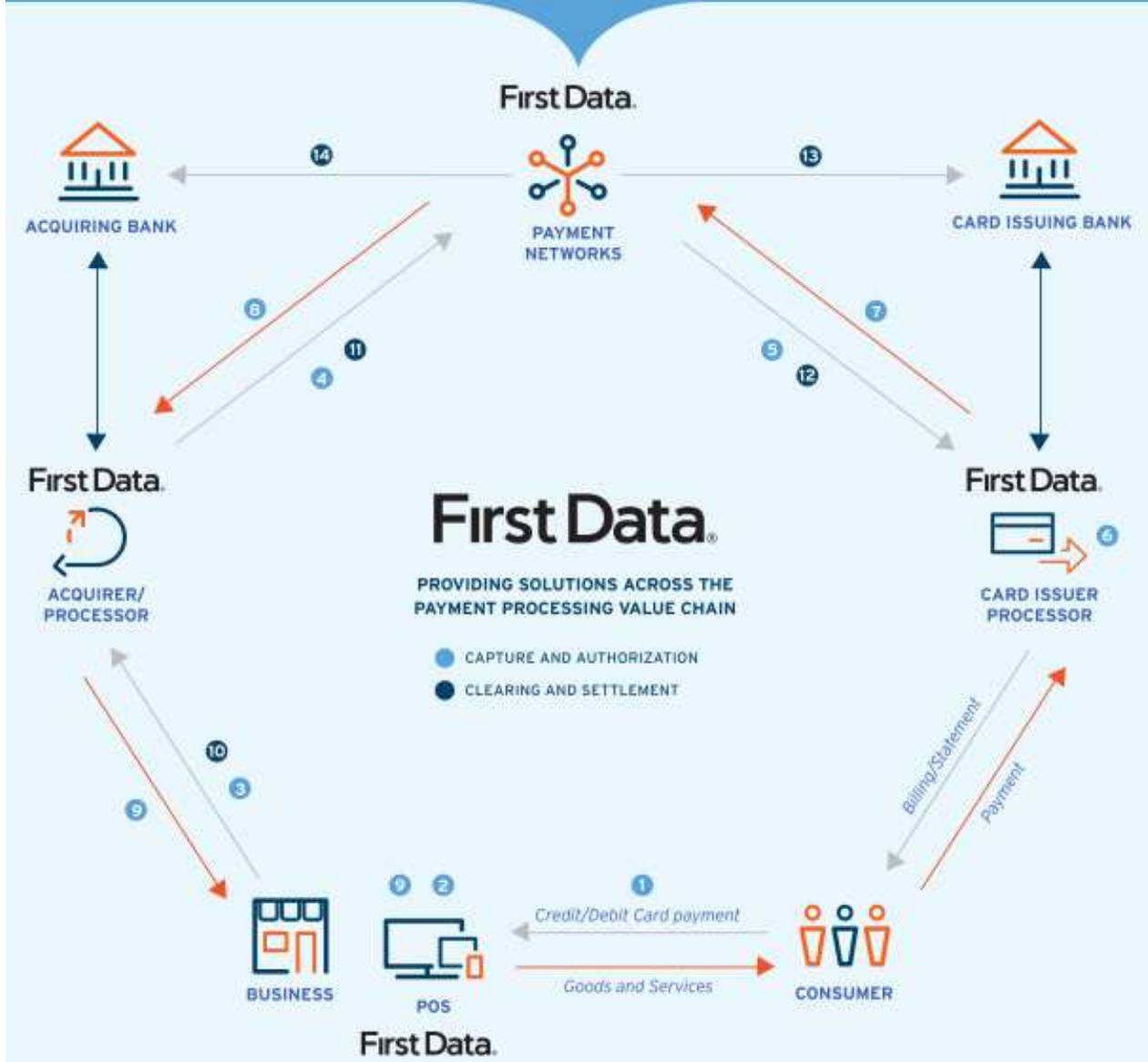


DIAGRAM OF A TRADITIONAL PAYMENT PROCESSING TRANSACTION

(Initiated at a physical, online, or mobile point-of-sale)



Capture & Authorization

In the capture and authorization process, the business obtains approval for payment from the card issuing bank. This process includes the following steps:

1. Once the consumer is ready to make a purchase, he or she presents their card for payment;

2. The card is swiped in the Point-of-Sale (POS) device at the business location, which captures the account information contained on the card's magnetic stripe or Europay, MasterCard and Visa (EMV) - compliant chip;
 - In a mobile commerce transaction facilitated by a mobile wallet, such as Apple Pay, the appropriate card details are stored virtually on an application on the phone and transmitted to the POS device through a chip equipped with near-field communication (NFC) technology;
 - In an eCommerce transaction, the POS device is replaced by a virtual terminal application and the consumer types the card number into the check-out page of the online storefront. In some circumstances, an online wallet, such as PayPal, may be used to transmit the appropriate payment credentials;
3. The customer's card details are transmitted from the POS to the merchant acquirer, or the merchant acquirer's processor, via an internet connection or a phone line;
 - In an eCommerce transaction, the information is encrypted and then transmitted to the merchant acquirer, or merchant acquirer's processor, via an online gateway;
4. The merchant acquirer, or the merchant acquirer's processor, identifies the appropriate payment network affiliated with the card, such as Visa, MasterCard, or STAR , and forwards the card details to the appropriate network;
5. The payment network receives the request for payment authorization, identifies the appropriate card issuing bank, and routes the transaction to the bank or its issuer processor;
6. The card issuing bank, or its issuer processor, receives the request and then executes a series of inquiries into its account systems to assess the potential risk of fraud for the transaction, establish that the account is in good standing, and verify that the cardholder has sufficient credit or adequate funds to cover the amount of the transaction;
7. The card issuing bank, or its issuer processor, approves or declines the transaction and sends back the response to the payment network. In this example the transaction is approved;
8. The payment network receives the approval and forwards the authorization to the merchant acquirer, or merchant acquirer's processor; and
9. The merchant acquirer, or merchant acquirer's processor, sends the authorization back to the POS device at the business location, which provides an approval confirmation and prints a receipt;
 - In a mobile commerce transaction, the approval confirmation and receipt may also be transmitted to the consumer's mobile wallet application or to the consumer via email;
 - In an eCommerce transaction, the authorization is sent to the online storefront, which communicates the approval to the consumer on the screen, and may provide the receipt for printing online or via email.

Clearing and Settlement

In the clearing and settlement process, a request for payment is initiated, funds are transferred and the transaction is posted to the business owner's and the consumer's account statements. The clearing and settlement process includes the following steps:

10. Typically at the end of the day, the business submits a batch of all of its approved authorizations to the merchant acquirer, or the merchant acquirer's processor, through a function on its POS device;

- In the case of an eCommerce business, the online storefront's gateway sends the batch to the merchant acquirer, or to the merchant acquirer's processor;
11. The merchant acquirer, or the merchant acquirer's processor, receives the batch, notes the final amounts due for settlement, and routes the batch of approved authorizations to each applicable payment network;
 12. Each payment network sends the batch of approved authorizations to the applicable card issuing bank, or its issuer processor, which posts the transaction to the consumer's statement;
 13. Typically within 48 hours, the payment network calculates net settlement positions for the merchant acquirer and the card issuing bank, sends advisements to the merchant acquirer and card issuing bank, and submits a fund transfer order to a settlement bank; and
 14. The settlement bank facilitates the exchange of funds between the merchant acquirer and the card issuing bank; and the merchant acquirer transfers the funds to the business owner's account.