



NFC Technology

As businesses grapple with the effects of the pandemic, discovering innovative customer engagement strategies will continue to take precedence as they plan for the post-pandemic era. There is an urgent need to utilize technology in closing the physical gap between companies and their customers.

In today's socially distanced world, contactless technology has become fundamental, not only for bridging that gap but also for guaranteeing the safety of customers. Many different forms of contactless technology exist but one which has been gaining momentum since the global pandemic first began is NFC.

According to [research](#), over 2 billion NFC-enabled devices are currently in use and roughly about 20% of the world's population utilizes NFC technology. With a growth projection of nearly \$50 billion by 2025, the NFC market isn't slowing down anytime soon.

What is NFC?

Near Field Communication or NFC is a form of short-range wireless technology that allows for communication between two electronic devices. In order for communication to take place, the devices must be in close proximity (a little distance of about 10cm or less); this is why it is often referred to as 'short range'. NFC enables users to make secure transactions, gain access to digital content, and connect with another device, all with a single tap.

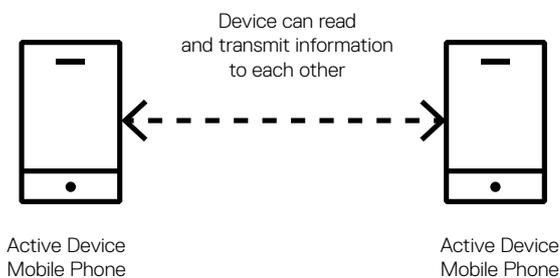
With fewer store walk-ins and more businesses wanting to limit physical contact between their employees and visitors, NFC could aid in facilitating contactless payments and shopping experiences.

How it Works

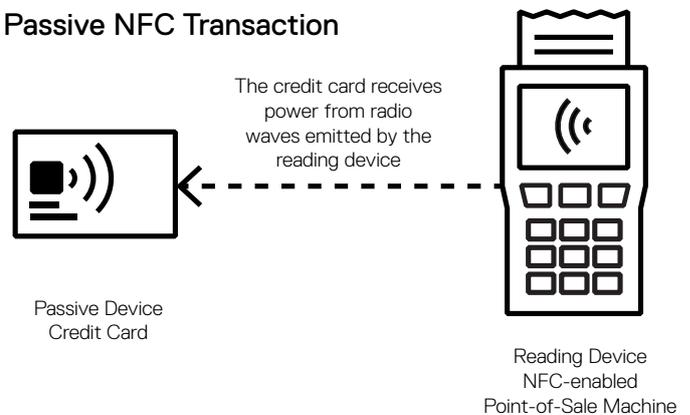
NFC is based on an older Radio Frequency Identification (RFID) technology that has been used by retailers for years to tag and track products within stores. With NFC, information is sent over radio waves. Typically, there is at least one transmitting device and another device that receives signals.

The communication between NFC devices can either be passive or active. Passive NFC transactions require only one device to supply electrical power. The passive device (which in some cases is a credit card) receives its power from the radio waves emitted by the reading device (an NFC-enabled point-of-sale machine). On the other hand, an active NFC transaction occurs when each device provides its own power. Both devices in an active transaction can transmit and read information over the near field.

Active NFC Transaction



Passive NFC Transaction

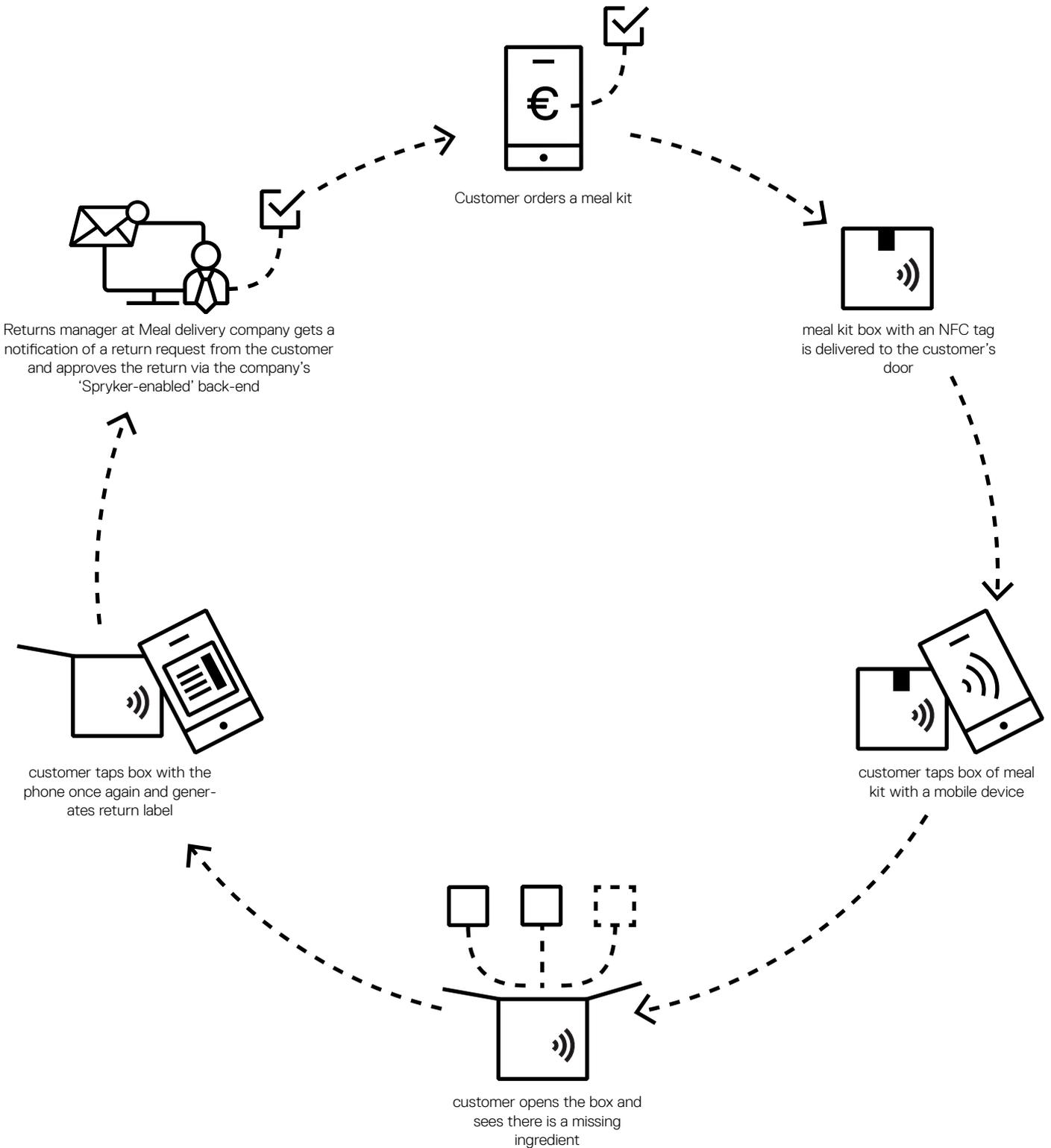


There are three modes of NFC communication. The first is the **Card Emulation Mode**. This is when an NFC-enabled device such as a smartphone imitates a payment card. The card-emulating device usually contains an NFC antenna (behind your phone's battery) and an embedded NFC tag that can transmit the card's details. By linking a credit card to your device, you can make payments by simply holding your device near an NFC-enabled payment machine. **Peer-to-peer (P2P)** is another mode of NFC communication. Here, two NFC-enabled devices can communicate with each other to share documents or images. With the **Reader/Writer Mode**, an active reading device supplies power and then reads the information on an NFC tag.

Possible Use Case

Imagine a customer orders a meal kit from a meal delivery service and the kit is equipped with an NFC tag. When the customer receives the order and connects his smart device to the kit, he could discover additional recipes and an instructional video on 'How to Make Honey Chipotle Chicken'. The customer could also discover promo codes and details about the meal delivery company's rewards program. In the event that there is a need for a return due to a missing or allergy-inducing ingredient, the customer could tap the kit using his device and automatically generate a return label.

With Spryker's e-commerce solution, return requests will immediately be stored on the meal delivery company's account. The warehouse returns manager could then view, track, and approve all expected shipments on the back-end. This sort of process simplifies the buyer's journey, gives them access to exclusive content, and significantly improves the company's workflow and efficiency.

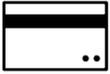


Opportunities with NFC Technology



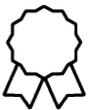
Customer Engagement and Loyalty

With NFC technology, you could engage your customers from a distance by delivering exclusive digital content through the NFC tag on the packaging of your product. With a single tap, customers can receive relevant product information as well as coupons and loyalty cards which will incentivize them to make future purchases. In physical stores, customers also have the opportunity to engage with smart posters or product catalogs that will expose them to more product options, campaigns, and promos.



Contactless Secure Payments

NFC requires electronic devices to be in close proximity of each other before transactions can be made. This guarantees safe and secure payments; customers wouldn't have to worry about their credit card information being compromised at any point.



Product Authentication

Adopting NFC technology could solve the counterfeit problem that brands and their consumers often face. With NFC tags embedded into your products, customers can easily verify the authenticity of items with your brand name which they have purchased. To confirm that the items belong to your company, all they would have to do is tap their smart device against your product. If product information or your website is displayed on their device, they will know that the items purchased are indeed genuine.



Easy Re-ordering and Repeat Purchase

Simplifying the ordering process for your customers can increase the chances of repeat purchases. When customers know that all they have to do is tap their NFC-enabled device against your product to place an order, they will be instantly motivated to make subsequent purchases. Spryker's B2C Suite makes stock and availability management uncomplicated; being able to efficiently manage inventory will help your company meet the recurring demand.



Customer Insights and Data

With recurring orders from your customers showing up on the back-end, you can easily gain insight into the frequency of purchases and other buying patterns displayed by your consumers. Spryker's e-commerce system allows for a much more effective order management and approval process, thereby enabling businesses to keep track of important metrics such as customer satisfaction and loyalty. These insights are particularly relevant when tailoring specific advertising campaigns to an audience or creating highly personalized content for customers. Ultimately, a deeper understanding of your customers will give you a chance to forge deeper long-lasting relationships with them.