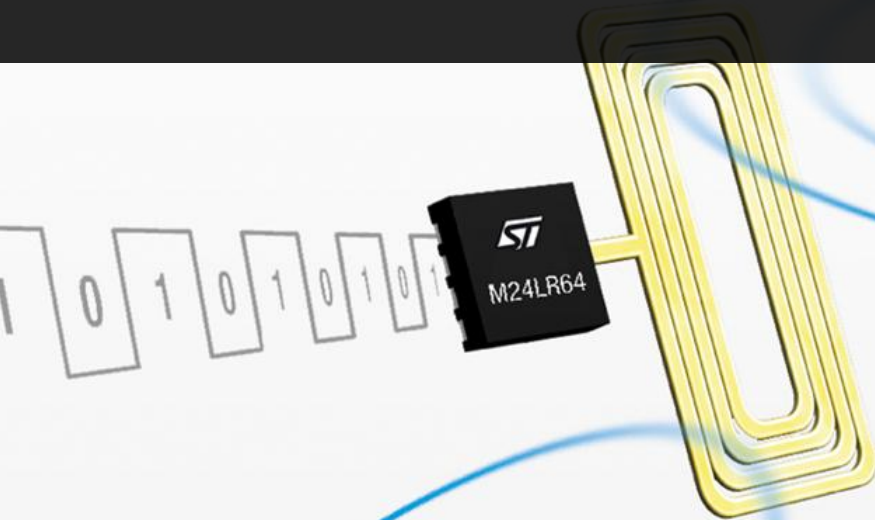


# NEAR FIELD COMMUNICATION



NFC

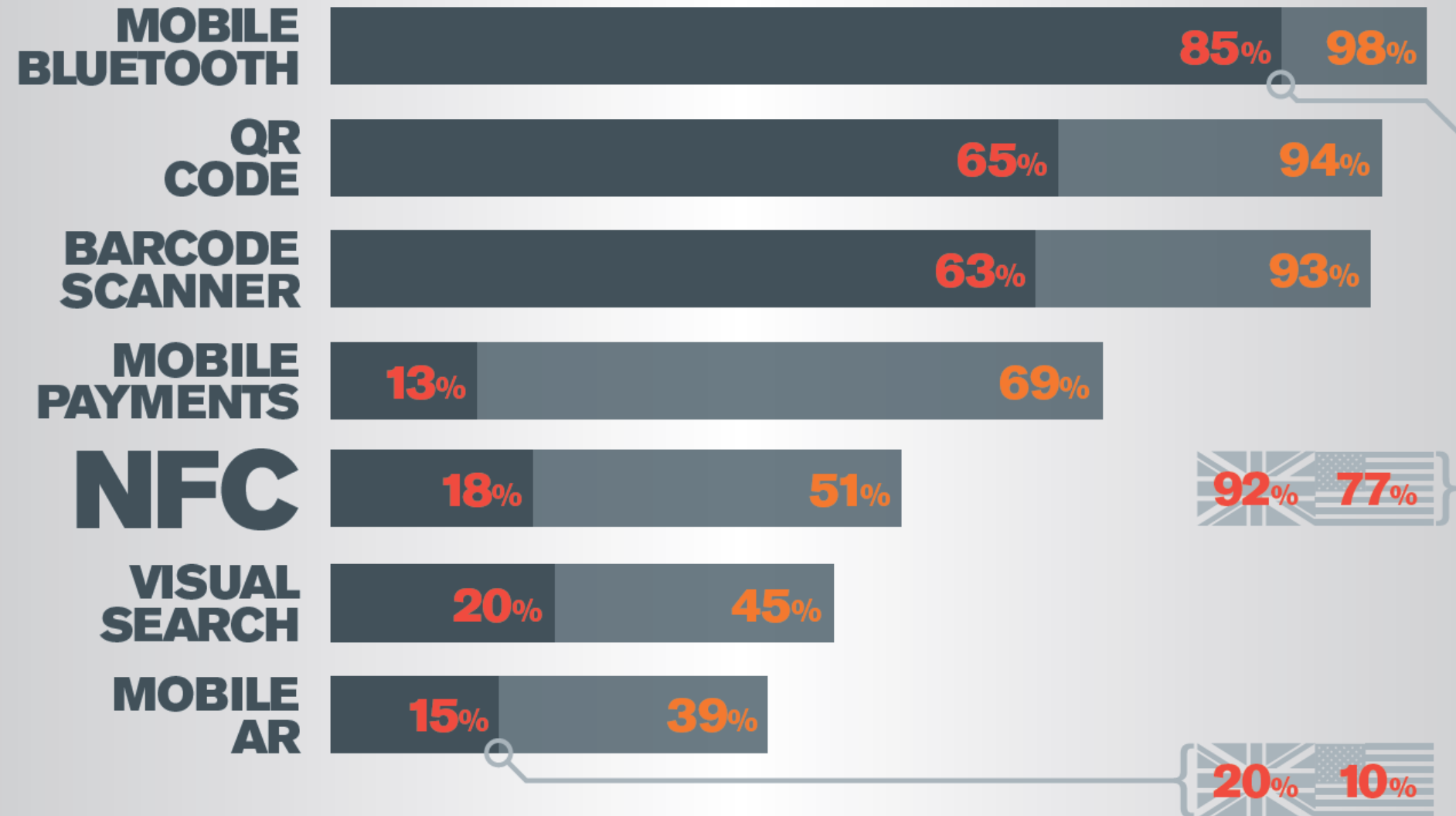


RFID

Vitaliy Yuryev,  
R&D Manager at SoftServe

# Mobile technologies

 **EVER USED**  **AWARENESS**



# RFID Technology

*“Radio-frequency identification is the use of a wireless system that uses radio-frequency electromagnetic fields to transfer data from a tag reader, for the purposes of automatic identification and tracking”*



WIKIPEDIA

# Why Should I Care About RFID?



Exxon SpeedPass



Mastercard PayPass

## Financial Transactions

## Asset tracking

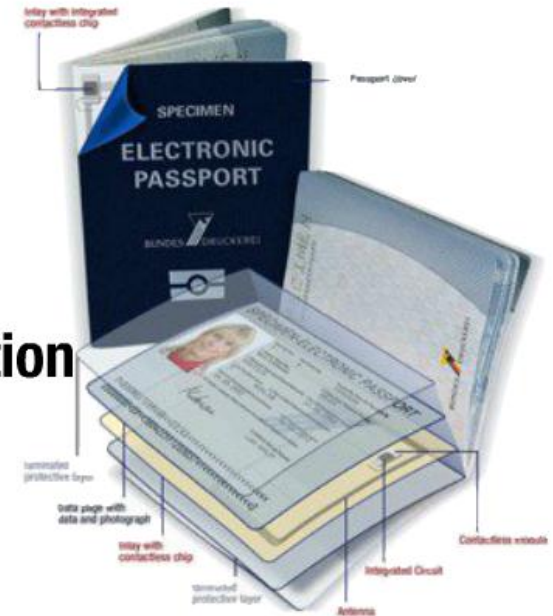


## Supply chain



SF Muni Clipper pass

## Identification



## Access control





# Casino Chips Theft Fail

man steals \$1.5M in chips,  
cashes them in for \$0 and jail

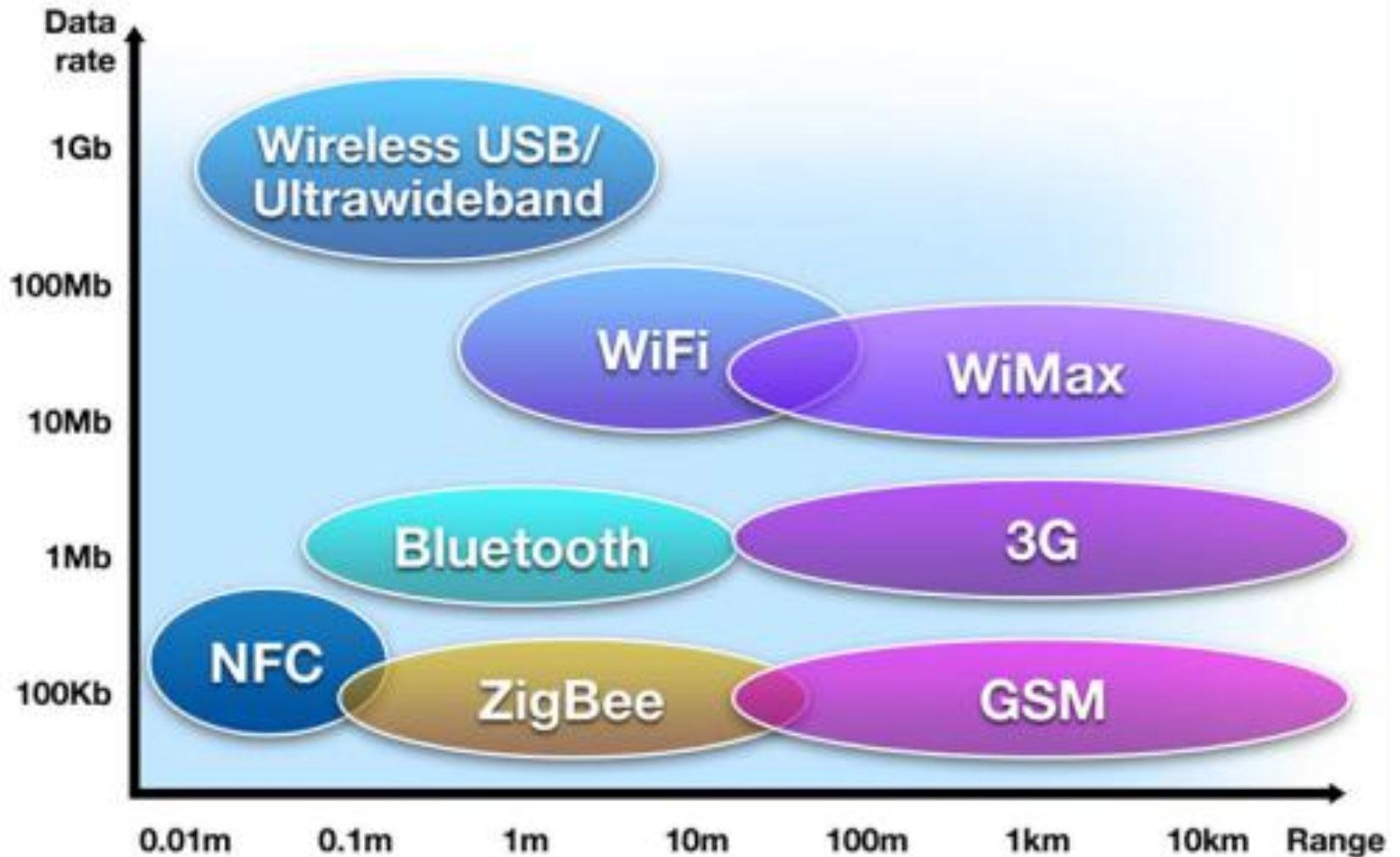


# Near Field Communication

- Contactless technology based on RFID 13,56MHz
- NFC is standardized ECMA-340 and ISO/IEC 18092
- Short distance: 0 - 4 cm
- Data rate up to 424 kbit/s



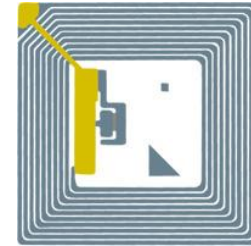
# NFC and Contactless Technologies



# NFC Modes



Reader/Writer



Peer-to-Peer

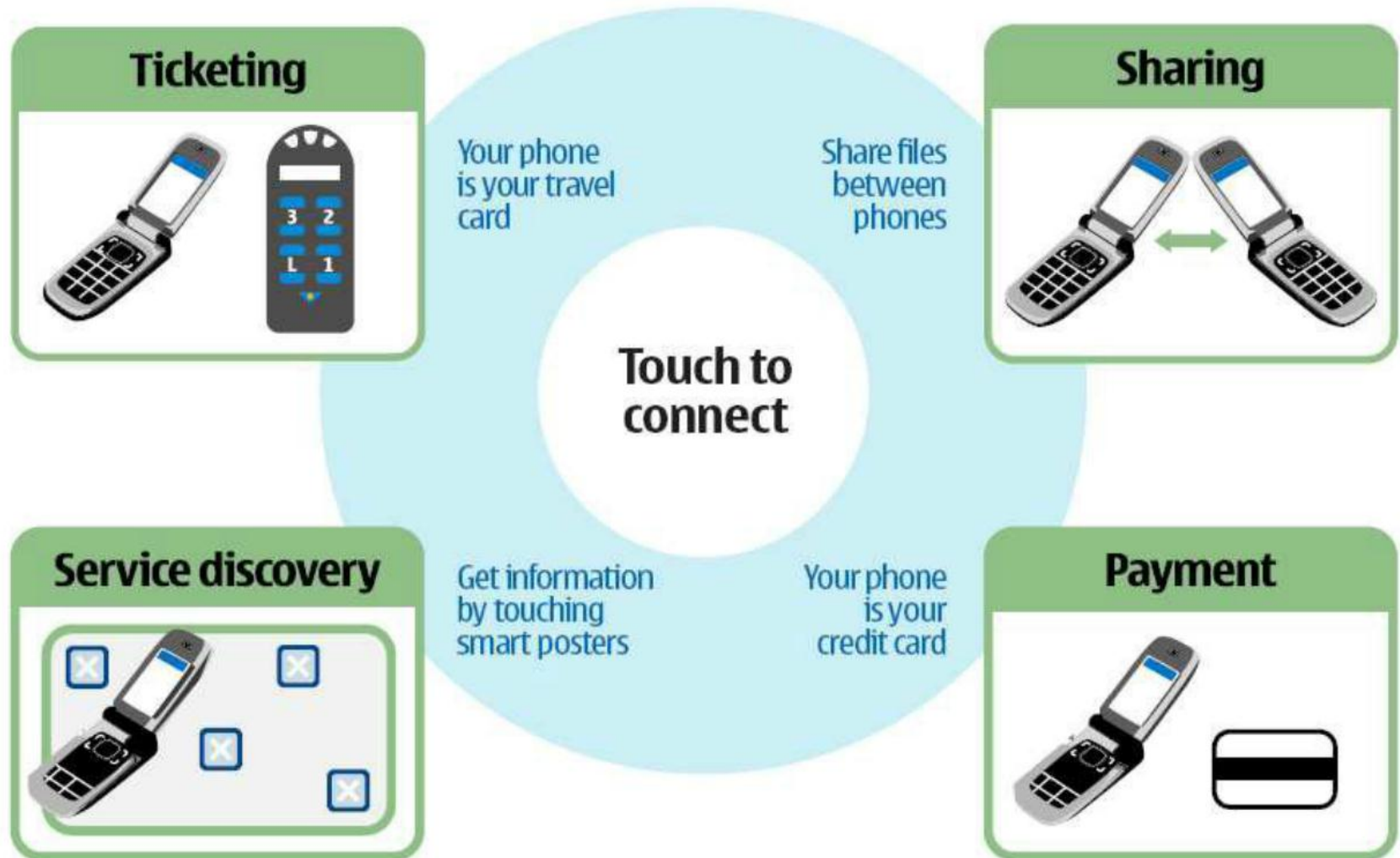


Card Emulation





# NFC Use cases



# In what context is NFC known

---

**90%**



**BANK  
CARD**  
CONTACTLESS  
PAYMENTS

**87%**



**MOBILE  
PHONES**  
CONTACTLESS  
PAYMENTS  
E.G. GOOGLE WALLETS

**70%**



**SHARING  
CONTENT  
WITH OTHER  
NFC-ENABLED  
PHONES**

**64%**



**TICKETING  
FOR EXAMPLE  
OYSTERCARD**



**61%**



**FOR INTERACTING  
WITH POSTERS  
USING YOUR  
MOBILE**



# Social Network Check In

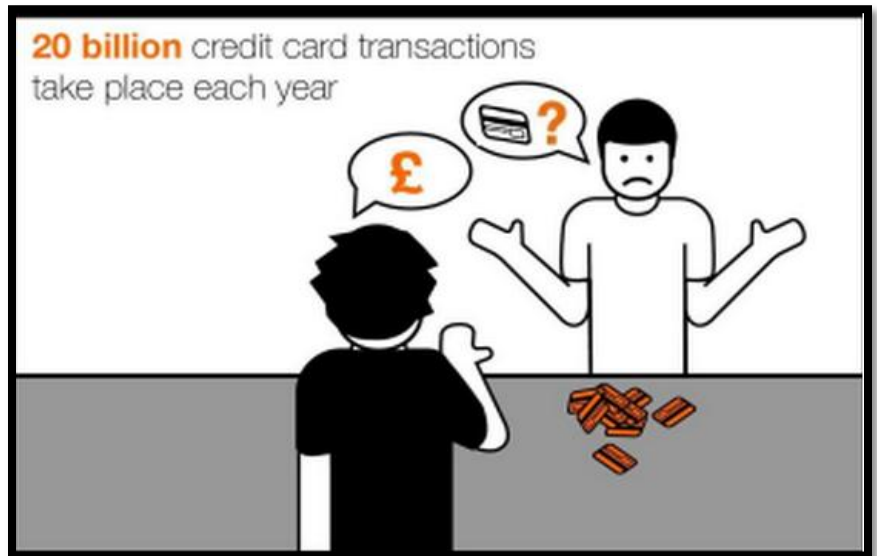
A photograph of a bar interior. In the foreground, a wooden bar counter holds a tall, clear glass filled with beer and ice. To the left of the glass, a small, light blue rectangular tag with rounded corners is placed on the counter. The tag has white text that reads "Tap to check in at Schlabo's Bar". Two blue lines originate from the tag: one points towards a text box on the right, and the other points towards a text box at the bottom right. The background is blurred, showing bar equipment and a person's arm.

Tap to check  
in at  
**Schlabo's  
Bar**

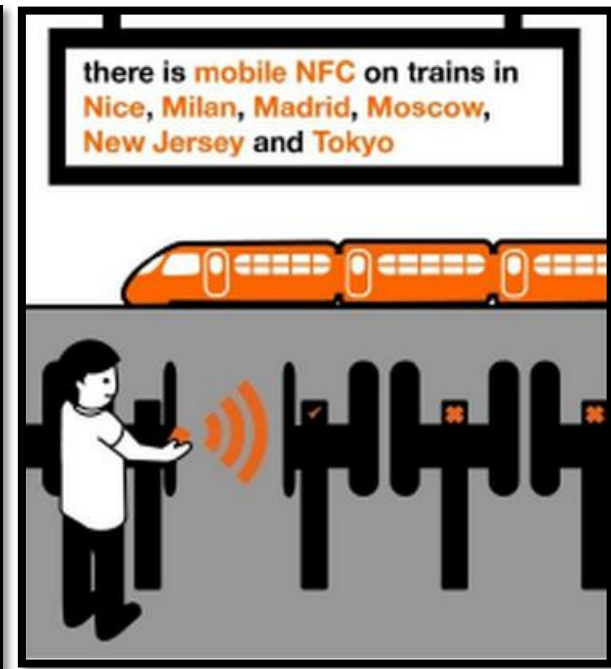
With an NFC tag placed in the bar, it's a matter of seconds, even indoors!

What do you need to store on the tag to make this work?

# Mobile Payments



# Ticketing 2.0





# Car Rentals

market potential: there are **1.76 million rental cars in the US**, generating \$22 billion in revenue



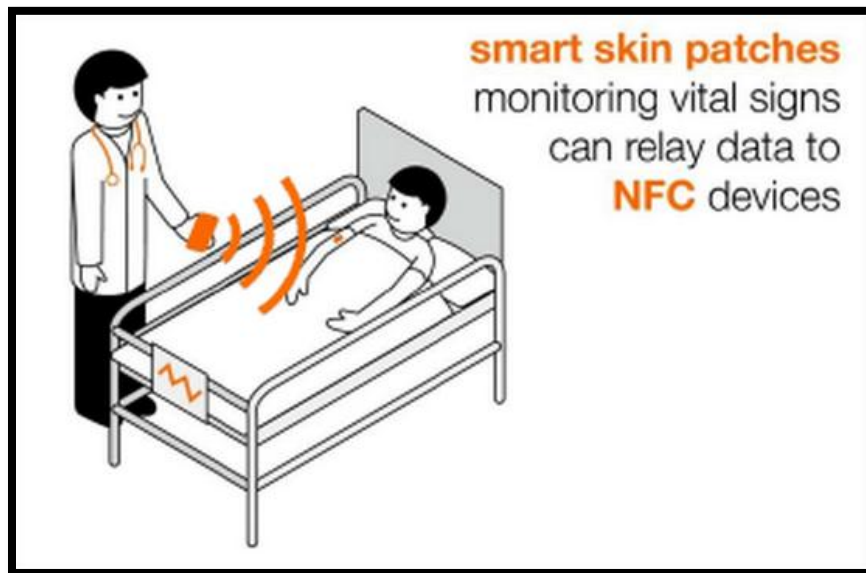
over **60%** of manufacturers plan to put **NFC** in cars



# Information Everywhere



# Medical Matters



# Questions?

