



# **RFID**

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## JOURNAL

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# **LIVE!**

**SEPTEMBER 26 - 28, 2021**  
PHOENIX CONVENTION CENTER | PHOENIX, AZ

## Connecting the Unconnected: NFC Today

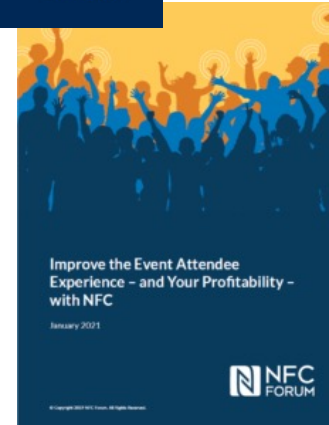
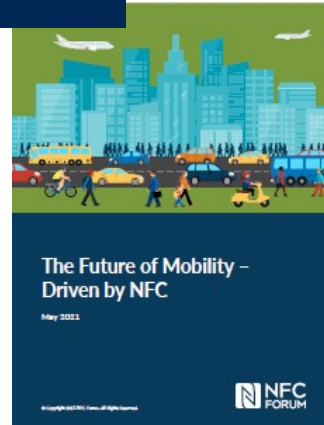
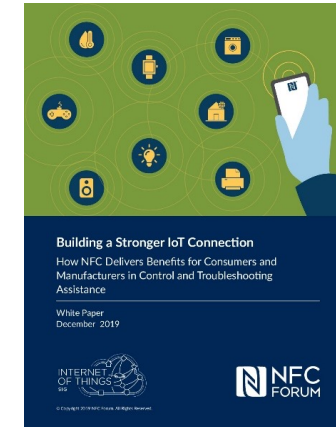
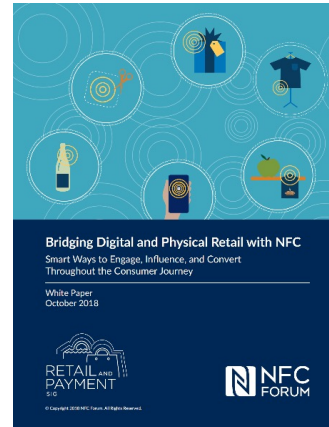
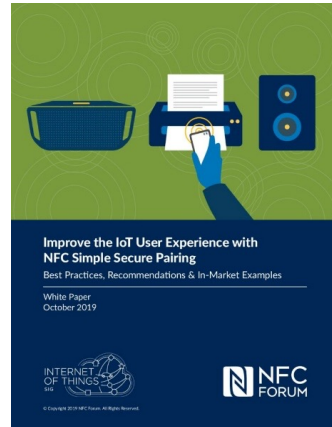
Mike McCamon

Executive Director, NFC Forum

# What most consumers think when hearing “IoT”



# How the industry is deploying NFC in IOT



# Drivers of Adoption

## NFC Handset Offers

- Nearly 3B Smartphones
- Secure Element
- Accessible from Lock Screen
- Low/No Power Operation
- Offline Operation
- User Intent

## NFC Does **NOT** Require

- Launching the Camera
- Receiving Optical Scanner
- User-Installed Application
- Custom Application
- Device Integration
- Battery

# Uniqueness of NFC as an RF Interface



## Intended

Securely starts at touch, and ends when removed



## Intuitive

Just a tap user friendliness



## Bi-Directional

Enhances security and can also deliver power

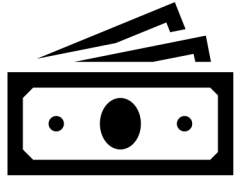


## Global

Affordable and natively supported by device OSs

... and already built into Billions of Phones

# Internet of Things not on the Internet



## Cost

Scale of Application  
Providing power  
Providing Connectivity



## Security

Reinforce Physical  
Sensitive Data  
Hacking & Ransomware



## Environmental

Uncontrolled  
Dirty & Noisy  
Social Pressure

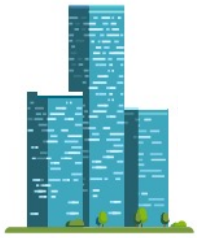


## Unpowered

Remote Sensing  
Form Factor  
Impractical

NFC can enhance wired/powered solutions, but can also enable entirely new unpowered applications

# Case Studies



Data Collection



Cold Chain



Augmented UX



Health Sensors

# Data & Industrial Systems

- Over half industrial systems offline
- Adding HMI expensive
- Networking not always practical
- Mobile Devices Provide
  - User interface
  - Network Uplink
- Module connects to debug port
- Technician taps read/write/operate



*IoTize provides TapNLink for quick integration*

# Cold Chain and supply chain monitoring

- Perishables face extreme conditions
- Supply chains are offline
  - No power
  - No internet
  - No wide area network
  - Difficult to Audit
- Module attached to Case
  - Accessed via tap
  - Monitors environment



*Italian winery attaches mobile with NFC to cases*

# Commercial and Multi-Unit Residential

- Over 1B live in multi-unit homes
- Multiple Tenants
  - Fragmented wireless LAN
  - Balance tenant/landlord control
  - Mix landlord only controlled
- Self-Diagnosis for technician
- Recent Announcements
  - HVAC Management
  - Circuit breakers without power



*HVAC/Electrical systems readable without power*

# Sensors for a Healthy Lifestyle

- Remote monitoring growing 6% yr
- Health Data = Most Personal Data
  - Ensuring user intent with a tap
  - Offline by design until shared
- Unparalleled ease of use
  - No Pairing
  - No Camera alignment
  - Never needs charging
- Wealth of supported metrics



*Variety of suppliers providing disposable self-adhesive health sensor patches that are no thicker than ordinary adhesive bandages*

# NFC Forum: Ideation to Market Success



## Use Case Ideation

Special Interest Groups  
Member Companies  
Standards Community



## Specifications

Working Groups  
Task Forces  
Liaisons and Partnerships



## Testing Compliance

Certification Program  
Test Cases  
Testing Labs & Tools



## NFC Certified

Interoperable  
Reliable  
Market-Ready



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# Contactless Advocates

The NFC Forum community is comprised of the most familiar **global technology and consumer companies** while also actively collaborating with dozens of adjacent technical bodies delivering technology, transport, packaging, and automotive solutions.



# Making Every Experience Better

- Unlike QR-Codes, tags can contain more than one URL, so...
- NDEF1 = yourapp:/tag/12345678
- NDEF2 = https://yoursite.com/onboard/tag/12345678
- And your app can write data back to the tag as well
- NDEF support is standard on mobile phones



# Register for a Live Webinar Tomorrow



**NFC FORUM** & **DEKRA**

**WEBINAR**

**Ensure interoperability, stand out, and improve user experience**

Learn more about the NFC Forum Certification Program.

**September 29, 2021 • 9:00 am ET**

Learn how to ensure interoperability and compatibility with devices with the NFC Forum Certification Program

**Register: [nfc-forum.org/events](https://nfc-forum.org/events)**



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# THANK YOU

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