



# Discovering NFC Ecosystem

Everything you need to know about NFC Solutions.

**Mobile NFC** offers new opportunities to network operators, banks, transport companies and other service providers.

This course will allow you to easily understand the main standards, technologies, features & security around this NFC ecosystem, including **UICC, HCE, Handsets, Trusted Service Management, OTA & Business Enabler solutions**.

**NFC** requirements for co-operation between these different stakeholders, and **GlobalPlatform** requirements for security and confidentiality will also be explained

## At the end of the training you will:

- > Understand what is Mobile NFC (Near Field Communication) and main use cases
- > Be able to describe Mobile Equipment SE & HCE architecture needed for NFC
- > Have an overview on UICC (SIM) Secure Element functionalities & OTA basic concepts
- > Know how the different actors (MNO, Bank, and Transport Operator) can manage several applications on the same card via Global Platform (GP) specifications
- > Understand Service Provider (SP) TSM role and possible architectures
- > Understand MNO TSM (Business Enabler) on server side and related specifications.

## Who should attend?

All people involved in Mobile NFC project:

- > Marketing Managers
- > Project Managers
- > Technical team
- > SIM Manager
- > VAS Manager
- > Operational Team
- > Security Managers

## Pre-requisites:

- > No specific pre-requisites for this course  
This course is held in English



## PROGRAM

### Introduction to Mobile NFC

- > What is Mobile NFC?
- > Use Cases
- > Business drivers & models for different actors
- > Market feedback on trends (JV, SIM rental...), lessons learned (enrolment, advertising...) & best practices
- > Real deployment examples, Case Study, & use-cases videos

### Focus on Mobile Equipment

- > Architecture for Mobile Contactless
- > Secure Elements & NFC-related protocols
  - o Different solutions compared
  - o Market trends
- > User Interface (UI)
- > Wallet introduction
  - o User experience for selecting & using NFC services (CRS, CREL concepts from GP2.2 Amendment C)
  - o UI technology & specifications
    - STK, Java, Android, and JSR 177, SIMalliance
- > Mobile Application – NFC UICC application security overview (Access Control)

### Focus on HCE, Tokenization, and SIM - Secure Element

- > What is HCE, how can it fit into NFC Ecosystem
- > What is Tokenization, how it can be used to mitigate risks when needed
- > Specific UICC features required for using as NFC services Secure Element
- > Security features
- > Remote management of data

### GlobalPlatform Basics

- > What is GlobalPlatform?
- > How actors can manage their applications on the same card
- > What is a Security Domain & how can it be used?
  - o Privileges, market trends...
- > Secure Channel Protocol overview (SCP80, 02, 81...)
- > Card Content Management basics (INSTALL, LOAD, PERSO, EXTRADITION...)
- > GlobalPlatform Commands summary
- > GP and Mobile NFC – Different Card architectures
  - o Pre-issuance, remote management of content...
- > Controlling Authority (GP2.2 Amendment A), Verification Authority & Certification concepts

### Trusted Service Management (TSM) - Introduction

- > What is TSM?
- > Split architecture between SP-TSM & SE Issuer (MNO)-TSM
- > Each Elements basic role
- > TSM deployment models & Server Architectures
  - o Corresponding Card architectures
- > Contracts management examples

### Focus on SP-TSM & MNO-TSM

- > SP-TSM & SE Issuer-TSM interfaces
  - o Standards (GP System Messaging API & AFSCM)
- > Service Life-cycle management processes examples (Eligibility, activation, lost handset...)
  - o SP-TSM & MNO-TSM solution examples
- > Demos: Payment use-case demonstration, lock-unlock with SP-TSM...