

**Bringing MNOs  
an end to end  
Mobile Connect  
Solution**

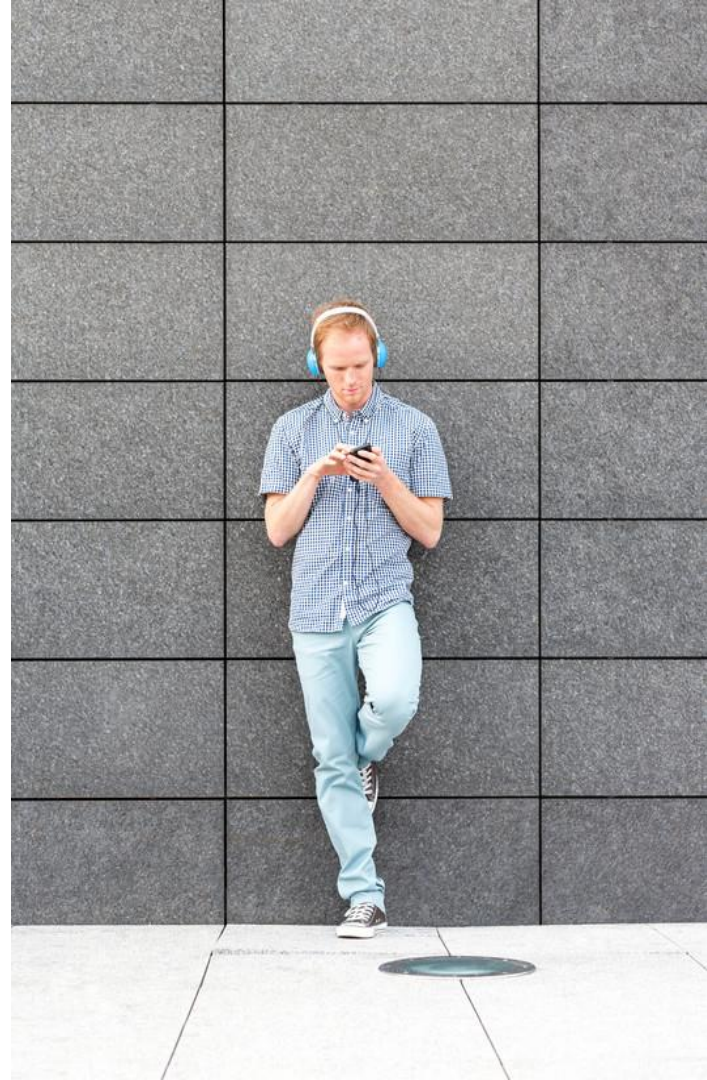
**Mobile Connect  
for Mobile  
Network Operator**



**Business  
Services**

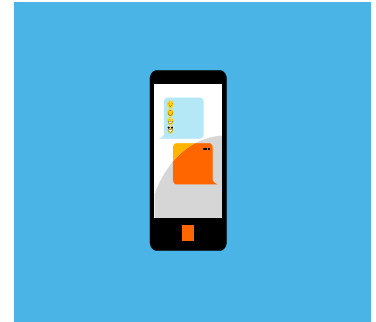


# What is Mobile Connect for MNO ?



# Unmatched end to end solution

1. Complete authenticator 'out of the box': SIM + SMS authentication / small footprint SIM applet + authenticator policy management
2. Mobile Connect Accelerator : subscriber management + self care portals – Identity Gateway – Service provider integration and management
3. Discovery services : API Exchange integration – portability data base integration



# Our approach with Mobile Connect for MNO

## Mobile Connect for MNO is:

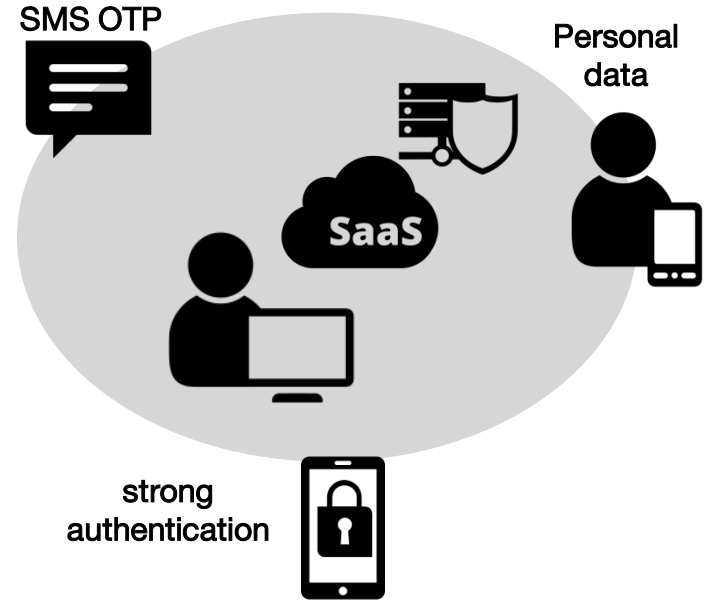
- A **highly secure** mobile centric authentication service
- Fully designed and developed by OAB under **GSMA** Mobile Connect guidelines
- **Managed cloud** solution hosted in OAB Datacenters
- A fully multi-lingual (ISO characters) small footprint -7 KB- Cardlet : LOA2 & LOA3 – designed for eIDAS compatibility
- A mutualized solution design for multiples MNOs and Service Providers
- A highly **scalable SaaS** offer
  - Fully independent and separated business functions & Databases
  - Fully redundant
  - Reliable and scalable



# Mobile Connect for MNO is a hosted complete package enabling MNOs to launch Mobile Connect Services

Our offer includes the following services:

- Mobile Connect for MNO platform: AE + dedicated MASP + dedicated OIDC
- Java Card Applet for unlimited users + SMS OTP fallback
- White label Customer Care + Self Care web environments
- Pro active platform management
- Support helpdesk to MNO
- Hosting



## Mobile Connect Services available

- > MC4MNO SIM based authenticator offers :
  - LOA2 Authentication – which is the basis to Freemium applications such as described by GSMA
  - LOA3 Higher security authentication + Autorisation + Identity + Attributes + Payment features that represent the large part of monetisable services

# Hosting (France)

- Hosted @ Orange Applications for Business Datacenter
- Managed by dedicated OAB resources following ITIL methodology
- SPoC to manage your service
- Global QoS (infrastructure / platform / Service)
- Service level reporting (vs platform of server reporting)



- Recovery Time Objective (RTO/GTR) : 4 hours
- Guaranteed Intervention Time (GIT/GTI) : 15 minutes
- Service Level Availability (SLA) : 99.85%



# Service management

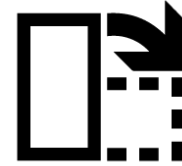
## 1 Monthly reporting

- Key Performance Indicators
- Problem reporting



## 2 Pro active scalability management

- Increase capability of servers (Ram, cpu,...)
- Increase number of servers to load balance



## 3 Software maintenance – Platform & Cardlet

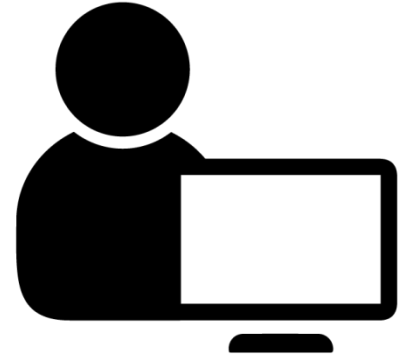
- Bug correction
- Product roadmap + lifecycle management



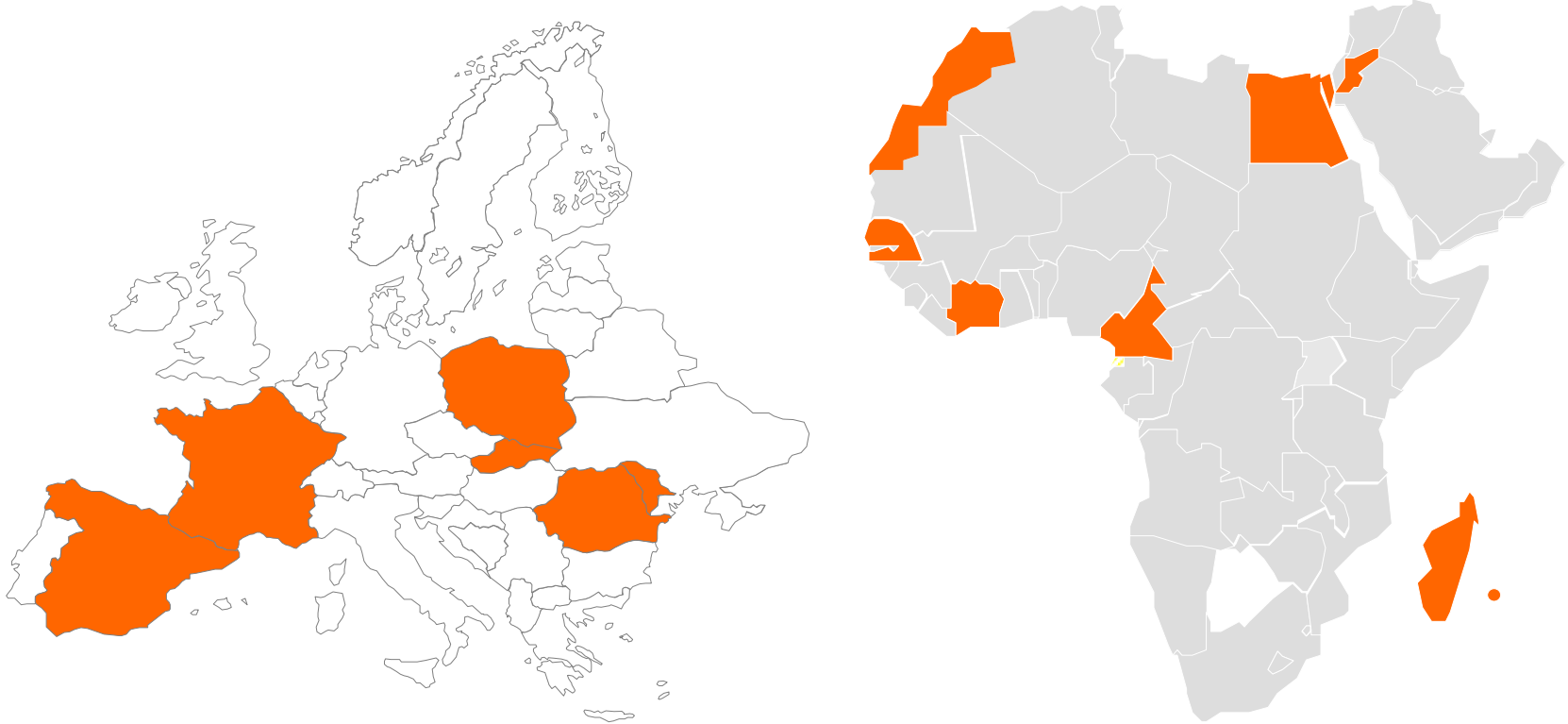


# MNO support

- **Support to ITIL standards**
- **Level 1 to level 3 support**
- **SPoC**
- **Customer care portal for your customer support representatives**
  - Web services with Mobile Connect for MNO functionalities
- **Self care portal for end-users**
  - Registration
  - Reset code
  - Usage statistics



## Current platform footprint



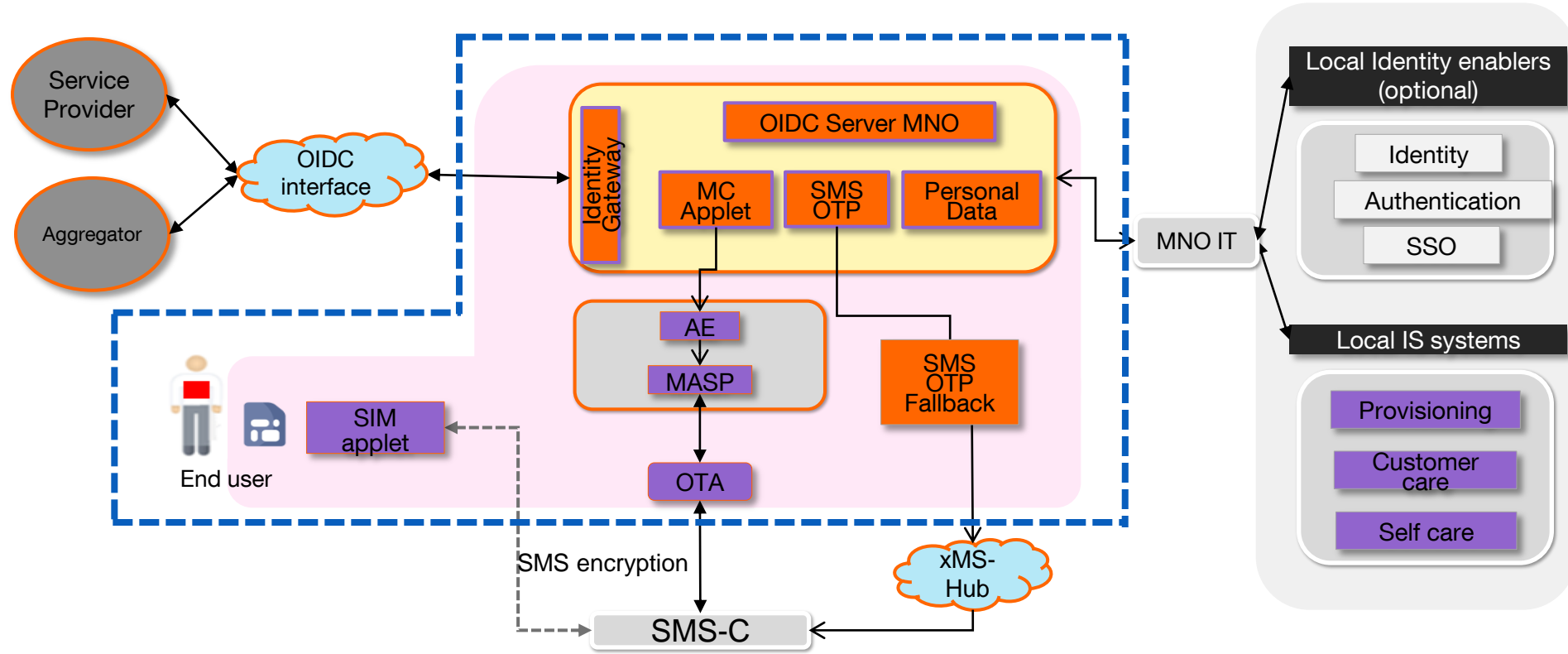
Full commercial launches in Spain, Marocco and Egypt

# Mobile Connect for MNO

## Functional Architecture & Technical Requirements



# Functional architecture



# Abbreviations

- **OIDC : OpenID Connect**
  - Authentication protocol based on OAuth 2.0
- **OTA : Over The Air**
  - includes OTA Gateway
- **Identity Gateway**
  - serves as connector between OIDC request coming from service providers and the Mobile Connect for MNO platform
- **MC API : Mobile Connect API**
  - connector to AE
- **AE : Acquiring Entity**
  - mutualized server which routes and performs authentication requests towards MASP servers
- **MASP : Mobile Authentication Service Provider**
  - dedicated server which emits authentication requests to mobile via the MNO OTA

# Technical Requirements

- Available OTA with VPN connection.

OAB will provide a Standardized

Service Contract to MNO for

integration purposes.

- Available SMS-C with VPN connection

- Cardlet compatible with most R5 / R6 release SIMS

	R6	R5
Global Platform	2.1.1 version march 2003	2.0.1
Javacard	2.2.1	2.1.1
3GPP	31.130 R6 v6.2	GSM 03.19 R5 v5.4.0
ETSI	102.241 R6 v6.7.0	NA

- Network Connection to MNO Information System – provisioning , customer care, self care & OIDC / IS attribute sharing with VPN connection.

# Mobile Connect for MNO

## Portals




# Mobile Connect Enrolment (Self Care) – Sign up in less than 5 minutes


Nouvel onglet x


Applications ★ Bookmarks http://192.168.1.1/ ...

## Mobile Connect

**Mobile Connect est un service sécurisé qui vous permet d'accéder à tous vos services favoris et vos comptes sécurisés en entrant un simple mot de passe à 4 chiffres sur votre téléphone mobile**

- 1.**  


Allez sur votre compte et cliquez sur 'Mobile Connect'.
- 2.**  


Entrez votre mot de passe à 4 chiffres sur votre téléphone.
- 3.**  


Accédez directement à votre service sans connaître votre nom d'utilisateur et votre mot de passe.

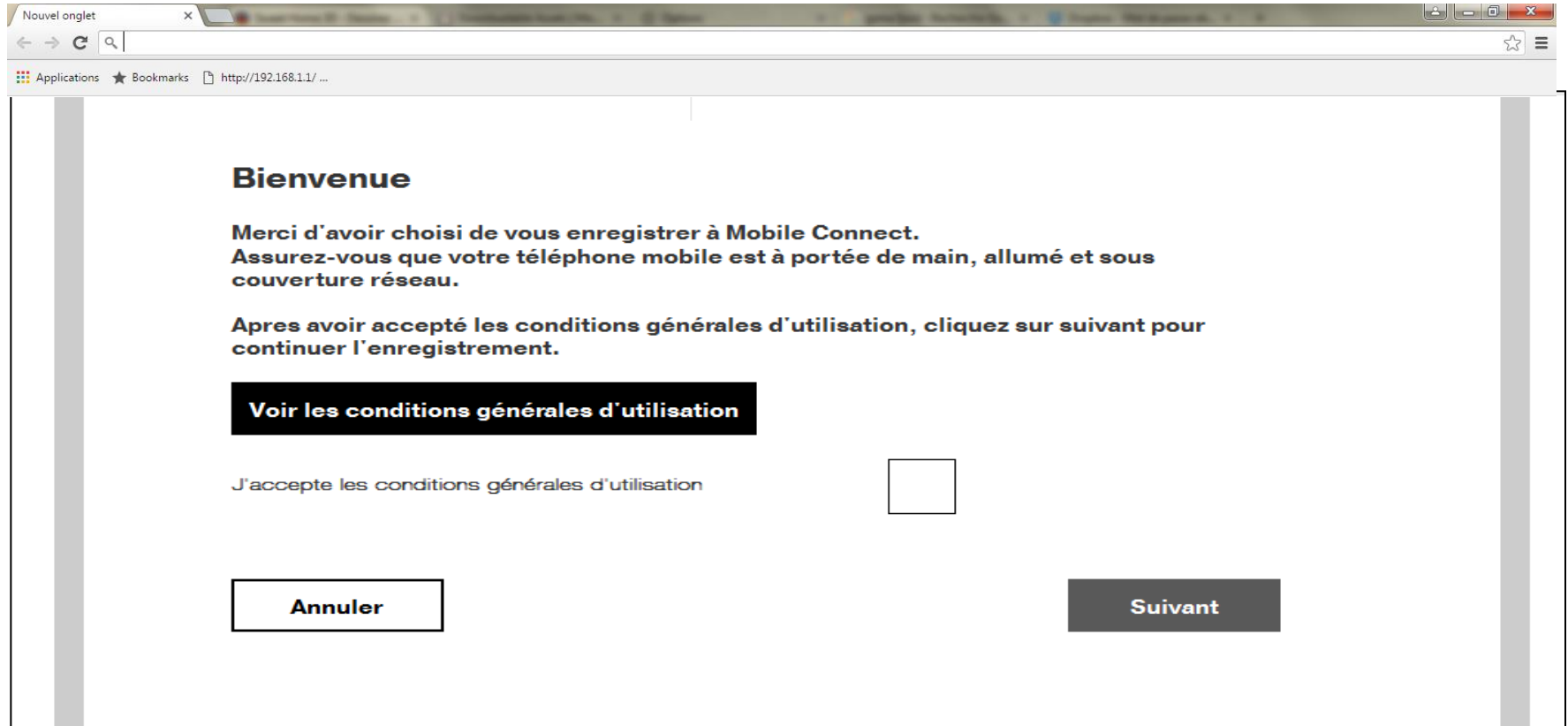
**Pour souscrire ou accéder à votre espace Mobile Connect, cliquez sur le bouton suivant :**

**Mon espace Mobile Connect**

ad.francetelecom.fr  
Accès Internet



## Enrolment – Step 2: Sign up T&Cs



The screenshot shows a web browser window with the address bar displaying "http://192.168.1.1/ ...". The page content is in French and includes a welcome message, instructions, and a button to view terms and conditions.

**Bienvenue**

Merci d'avoir choisi de vous enregistrer à Mobile Connect.  
Assurez-vous que votre téléphone mobile est à portée de main, allumé et sous couverture réseau.

Après avoir accepté les conditions générales d'utilisation, cliquez sur suivant pour continuer l'enregistrement.

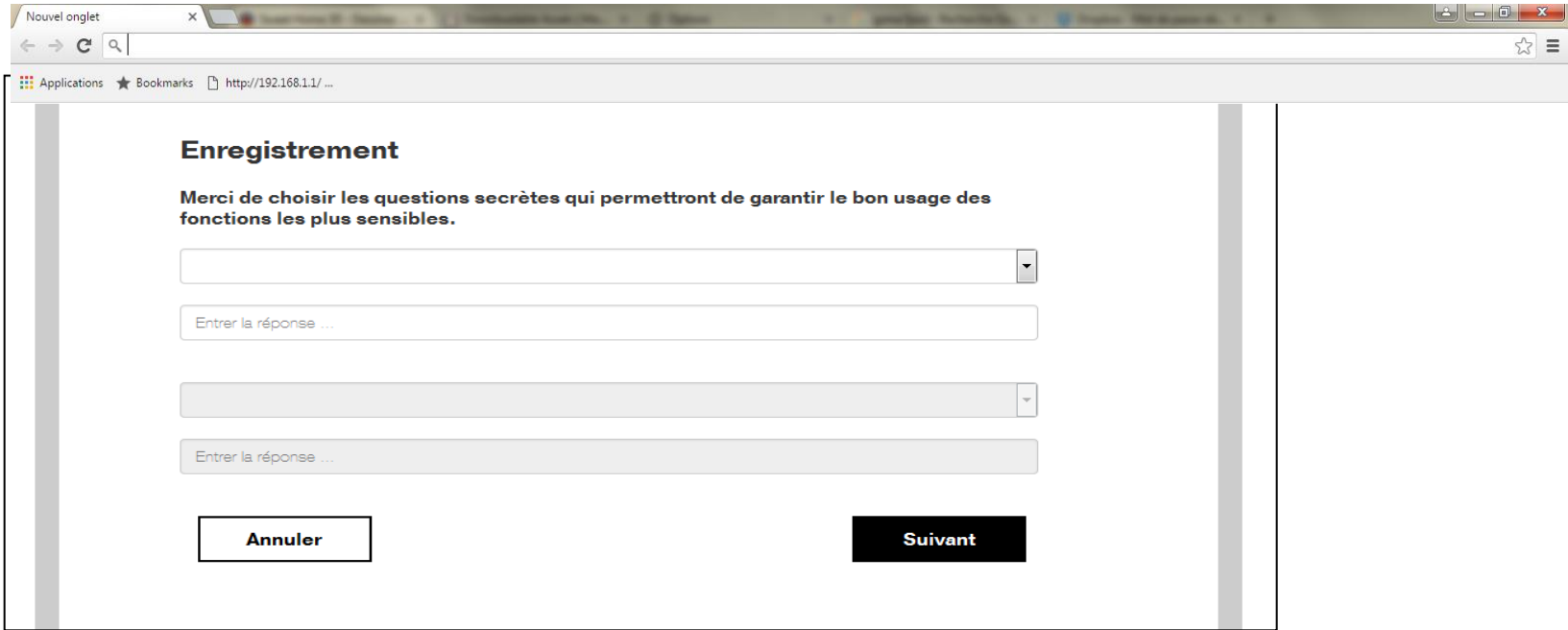
**Voir les conditions générales d'utilisation**

J'accepte les conditions générales d'utilisation ☐

**Annuler** **Suivant**

- T&Cs management

## Enrolment – Step 3: 2 secret questions



Nouvel onglet

Applications Bookmarks http://192.168.1.1/ ...

### Enregistrement

Merci de choisir les questions secrètes qui permettront de garantir le bon usage des fonctions les plus sensibles.

Entrer la réponse ...

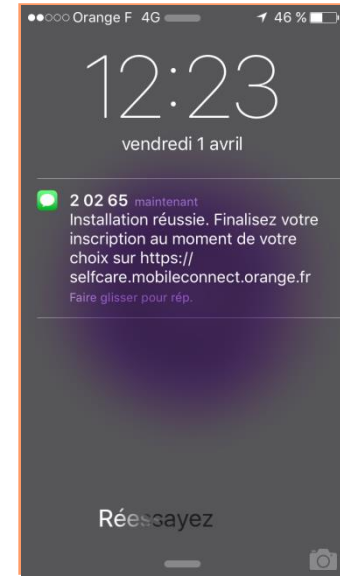
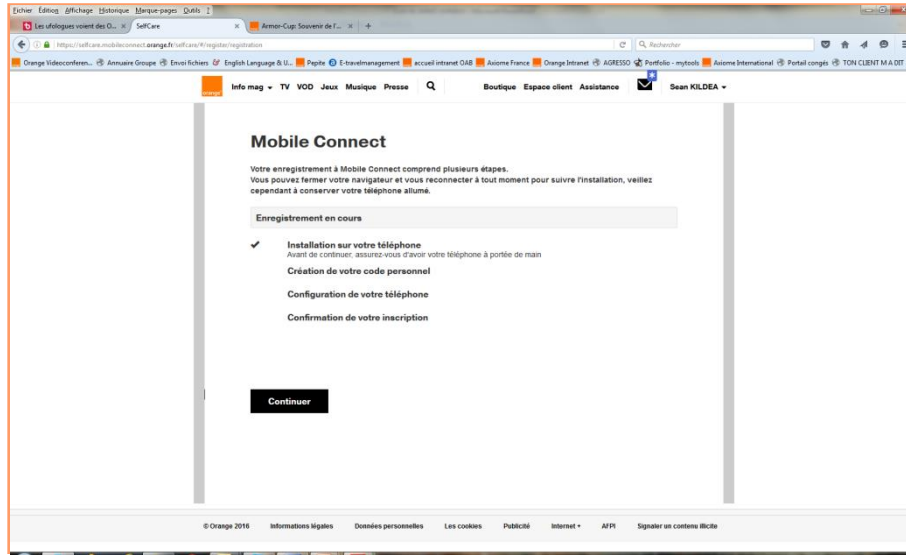
Entrer la réponse ...

Annuler Suivant

- Secret questions are designed to protect access to most sensitive requests in self-care
  - PIN change (code forgotten)
  - PIN reset (more than 3 mistakes)

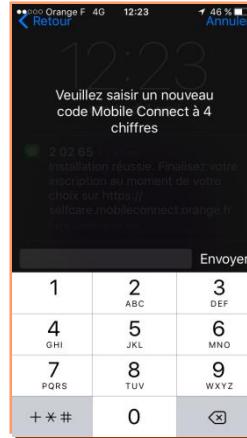
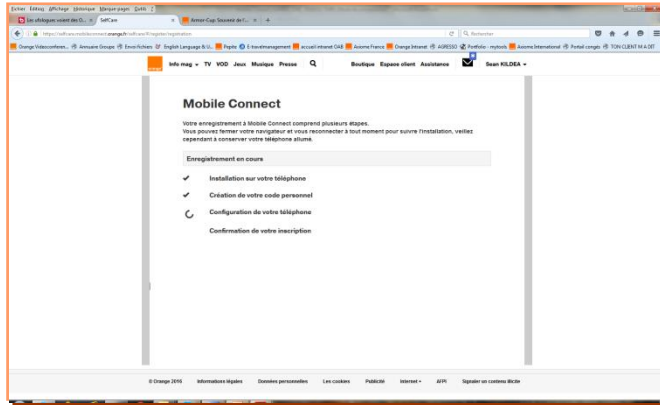
# Step 4 : Applet download via OTA

> Download confirmed by SMS

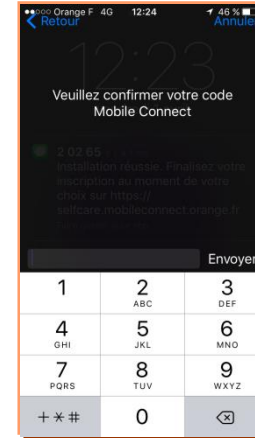


# Step 5 : Initialize PIN on Mobile

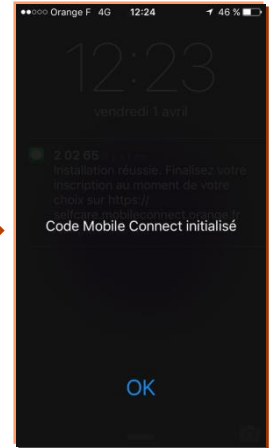
- > PIN is securely stored on SIM



Create



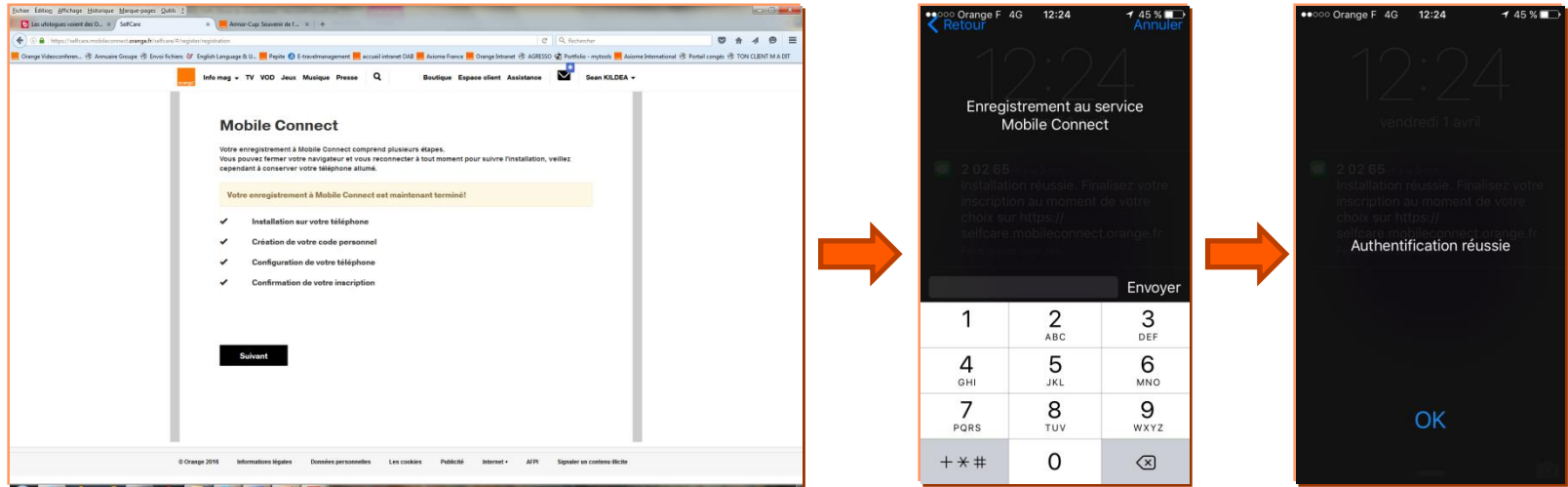
Confirm



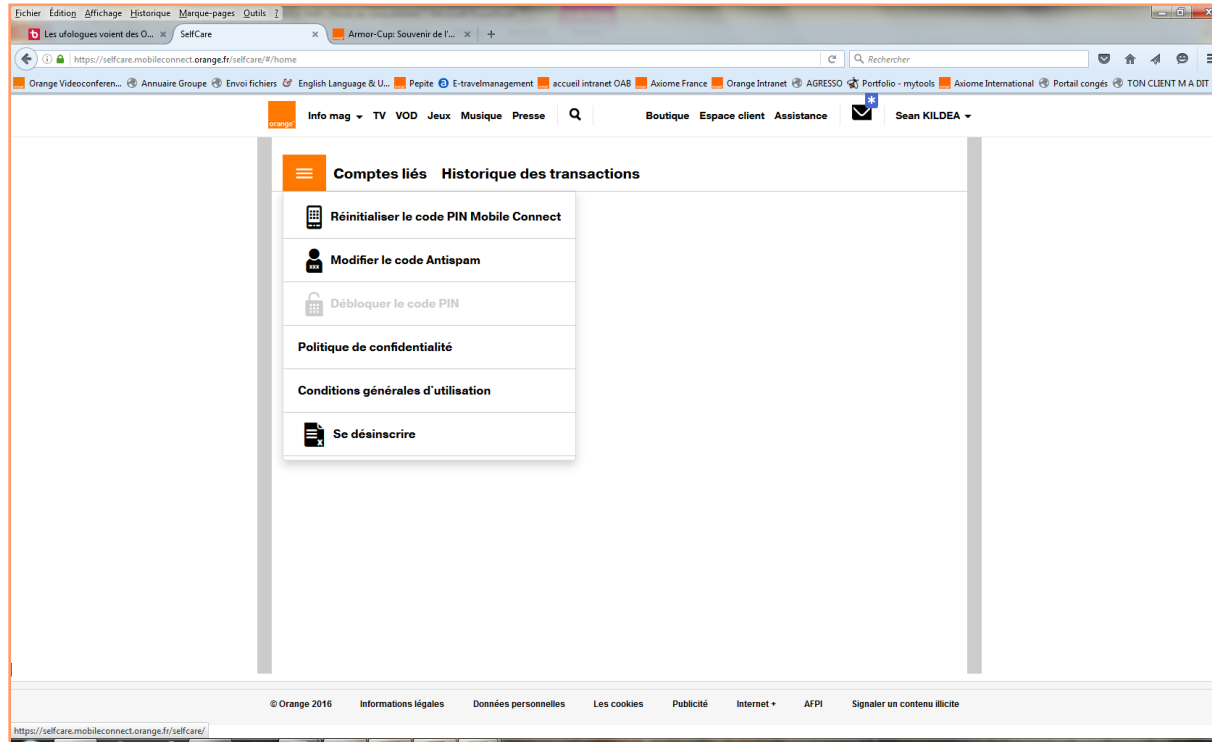
End

# Step 6 : Wrap up

> Last confirmation by entering PIN on Phone

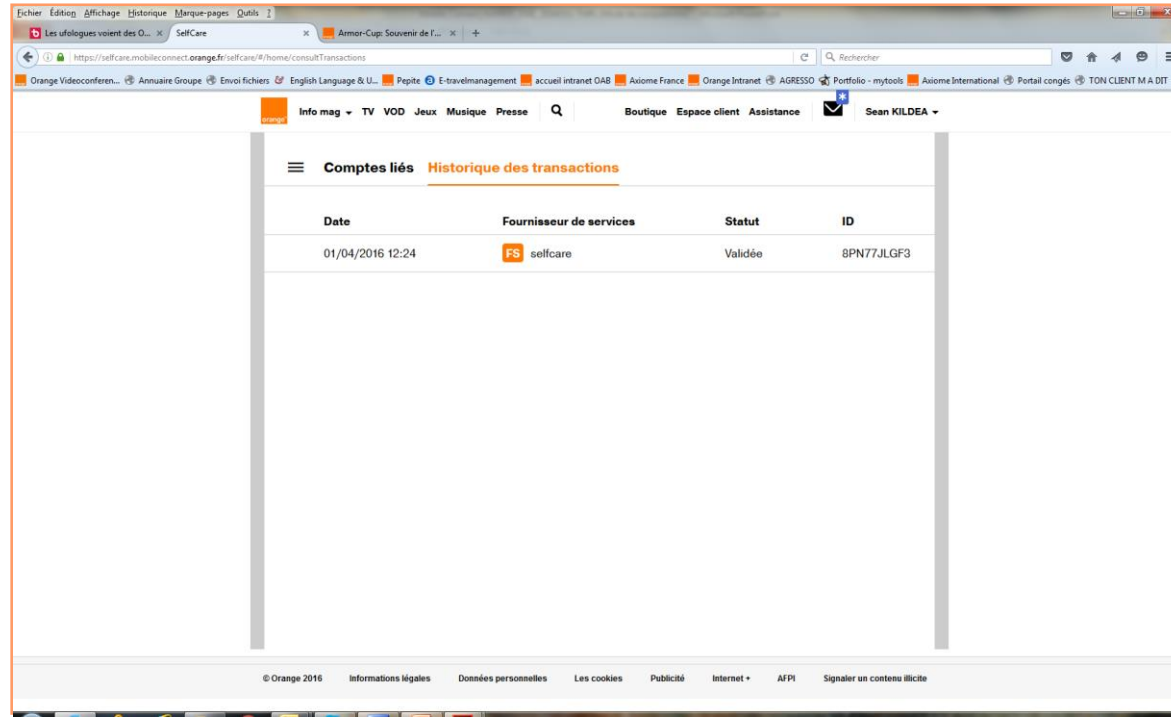


# Selfcare 1/2




- > Reset PIN
- > Change Anti Spam code
- > Unlock
- > T&Cs
- > Unsubscribe

# Selfcare 2/2



The screenshot shows a web browser window with the URL `https://selfcare.mobileconnect.orange.fr/selfcare/#/home/consultTransactions`. The page has a header with navigation links like 'Info mag', 'TV', 'VOD', 'Jeux', 'Musique', 'Presse', 'Boutique', 'Espace client', and 'Assistance'. Below the header, there's a section titled 'Comptes liés' with a sub-tab 'Historique des transactions'. A table displays transaction data with columns for Date, Fournisseur de services, Statut, and ID.

Date	Fournisseur de services	Statut	ID
01/04/2016 12:24	 selfcare	Validée	8PN77JLGF3

- > Transaction history
- > List of SPs subscribed to

# Mobile Connect for MNO

## Economical Models





## Build and Run PAYG model basics – to be discussed

### Build

- One time setup fees
- Including platform setup and integration
- Excludes specific translations (upon request)
- Unlimited user Cardlet license (within standard implementation)

### Run

- Basic service fee for platform including first 5% of total customer/SIM base
- Extended service fee per active user > 5% user base (used the service once in last 12 months)

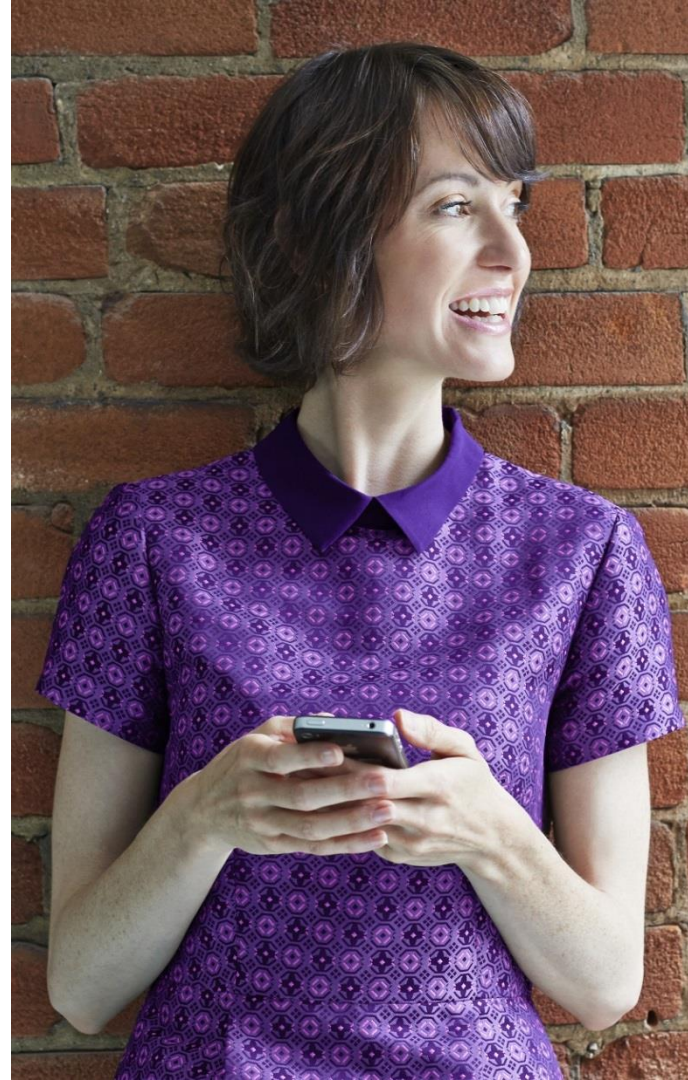
## Additional optional services

- Service Localization (self care and customer care)
- Cardlet customization
- Cardlet for unsupported SIMs
- Business consulting
- Aggregator Services



# Orange Applications for Business

## Presentation



# gathering application and integration expertise in a single entity

3 complementary growth areas

**unique business** integration of systems to enhance your business performance

customer experience



create a unique 360° customer journey

big data analytics



extract business insights from data

Internet of Things



run connected things and machines

the power of a telecom operator with the expertise of a digital services provider  
your specialist for digital transformation



## Key figures

**+11,000**  
customers

from SMEs to MNCs (300  
outside France and 7,000 with  
SaaS solutions)

**+2,400**  
employees

including +250 outside France

**60,000**  
M2M devices

(smart products)

**11 million**  
app store  
downloads

**+ € 300**  
**million**

turnover in 2013



# Main know-hows and certifications

## Experience

- For over 25 years, Orange Applications for Business has managed critical systems for its customers operating with several levels of certification



## Certifications

- Certified CMMI Level 3 for Software Development
- Conforming to processed methodology ITIL rev 3 (ISO 21000) for Operation of Services. Most of operational teams are ITIL certified
- ISO 9001 on several OAB business lines
- Several OAB employees are certified “ISO 27001 Lead Implementer” for information security management system.
- OAB follows best practice recommendations on information security management of ISO 27002 and security rules published by ANSSI.
- OAB operates some PCI-DSS certified payment services
- OAB TSM allowing deployment of NFC Mobile Payment is certified by Mastercard since 2013;



## Member of Industrial organization

- GlobalPlatform (System Committee)
- AFSCM (Association Française du Sans Contact Mobile)
- ADCET ('alliance pour le développement des transactions électroniques dans les collectivités territoriales)

**Thank you**

