

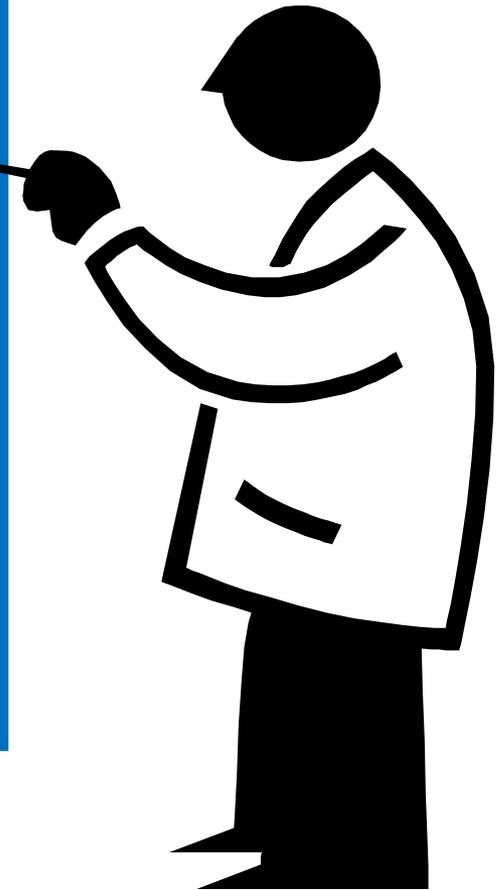
# Austrian Experience with Mobile ID vs. Smartcard ID

[Herbert.Leitold@a-sit.at](mailto:Herbert.Leitold@a-sit.at)

ISSE 2016  
Session “Mobile Security”  
Paris, November 15<sup>th</sup>, 2016

# Contents

- Austrian eID Programme
- Austrian Mobile Signature
- Usage and Business Model
- Lessons Learned



# Austrian Citizen Card - an Overview

- Launched 2003, mass-rollouts from 2005
- Defines functions, not the technology
  - Identification, *sector-specific to enhance privacy*
  - Qualified signatures, *for written form*
  - Electronic mandates, *representation*
- Technology-neutral approach allowed for different implementations
  - Smartcards and mobile from 2005
  - Foreign eID recognised from 2008

# The technologies

## Smartcard



Bank cards  
*from 2005; ceased*



Health insurance card  
*since 2005*



Profession cards,  
service cards, ...  
*e.g. notaries, lawyers,  
ministries, ...*



## Mobile

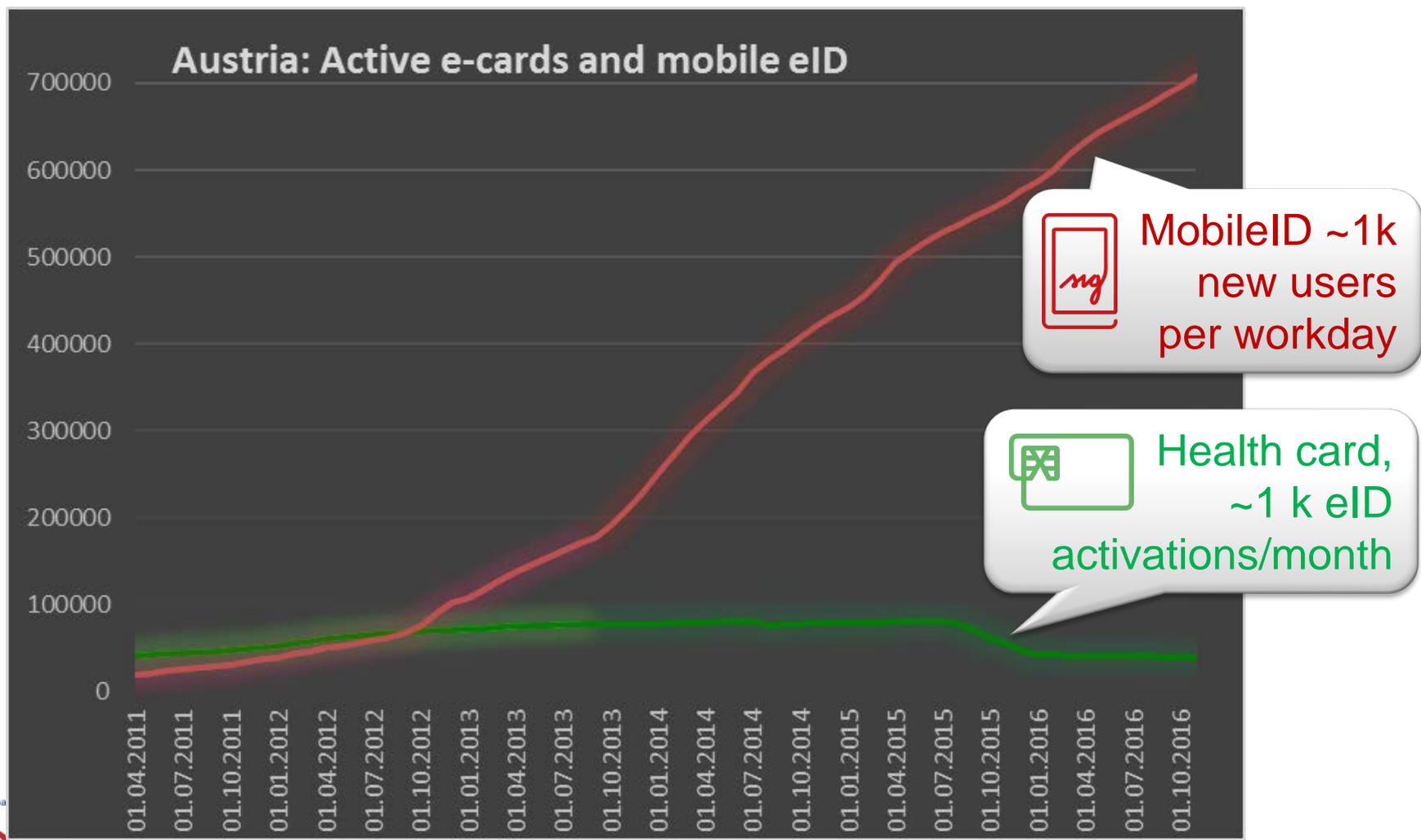


A1 signature  
service by a MNO  
*from 2005; ceased in 2008  
limited success*



Mobile phone signature  
*Launched end 2009 through  
the LSP STORK  
Contracted by gvmnt. to a  
private sector CSP  
Success? Well, let's see ...*

# Austria: Card vs mobile ID active users



# Austrian eID – key characteristics

- Gvnmt. identity base (Population Register), but
  - open to public and private sector credential providers
  - open to public and private sector relying parties
  - LoA “high” (eIDAS definition, not yet notified)
- Voluntary system
  - Citizen may activate credentials is has (health insurance card, (bank cards), mobile phone, CA’s smart cards)
- Free of charge for
  - relying parties (both private sector and public sector)
  - citizens (health insurance card or mobile phone)

# Some 300+ applications

<https://www.buergerkarte.at/en/applications-mobile.html>

## Formulare mit Signatur

Filtern nach: Suchwort  Signaturformat **Handy-Signatur** ▾

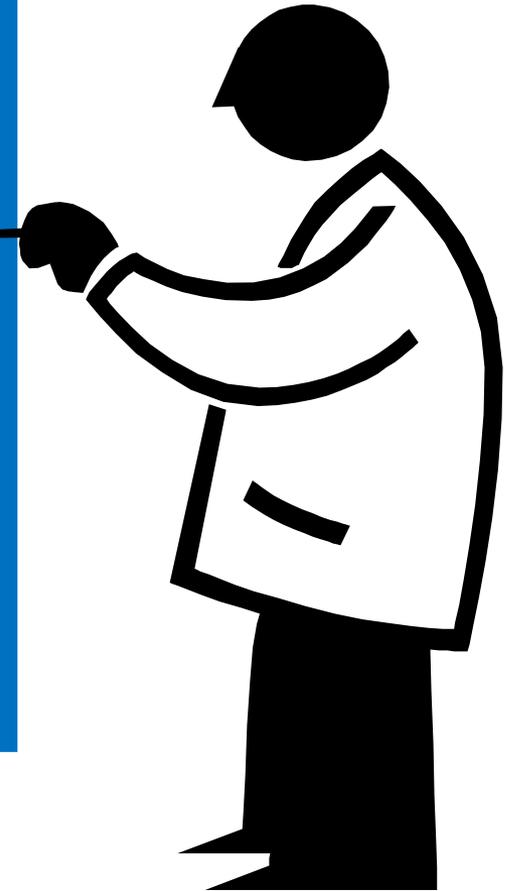
In Klammern hinter dem Formularnamen finden Sie die Anzahl der Anbieter.

- **Abbruch - Anzeige (1)**   
- **Abgabekonteninformation - Detailübersicht (Stadt Salzburg) (1)**   
- **Abgabekonteninformation - Saldenübersicht (Stadt Salzburg) (1)**     
Der Online-Blick in das persönliche Abgabekonto.
- **Allgemeines Anbringen - Amt der Landesregierung (1)**   
- **Allgemeines Anbringen - Bezirkshauptmannschaft (1)**   
- **Allgemeines Anbringen - Bundeskanzleramt (2)**   
- **Allgemeines Anbringen - Gemeinde (18)**   
- **Allgemeines Anbringen - Justiz (1)**   

Mit diesem Online-Formular können Sie elektronische Eingaben (Erst- und Folgeeingaben wie Kl...

# Contents

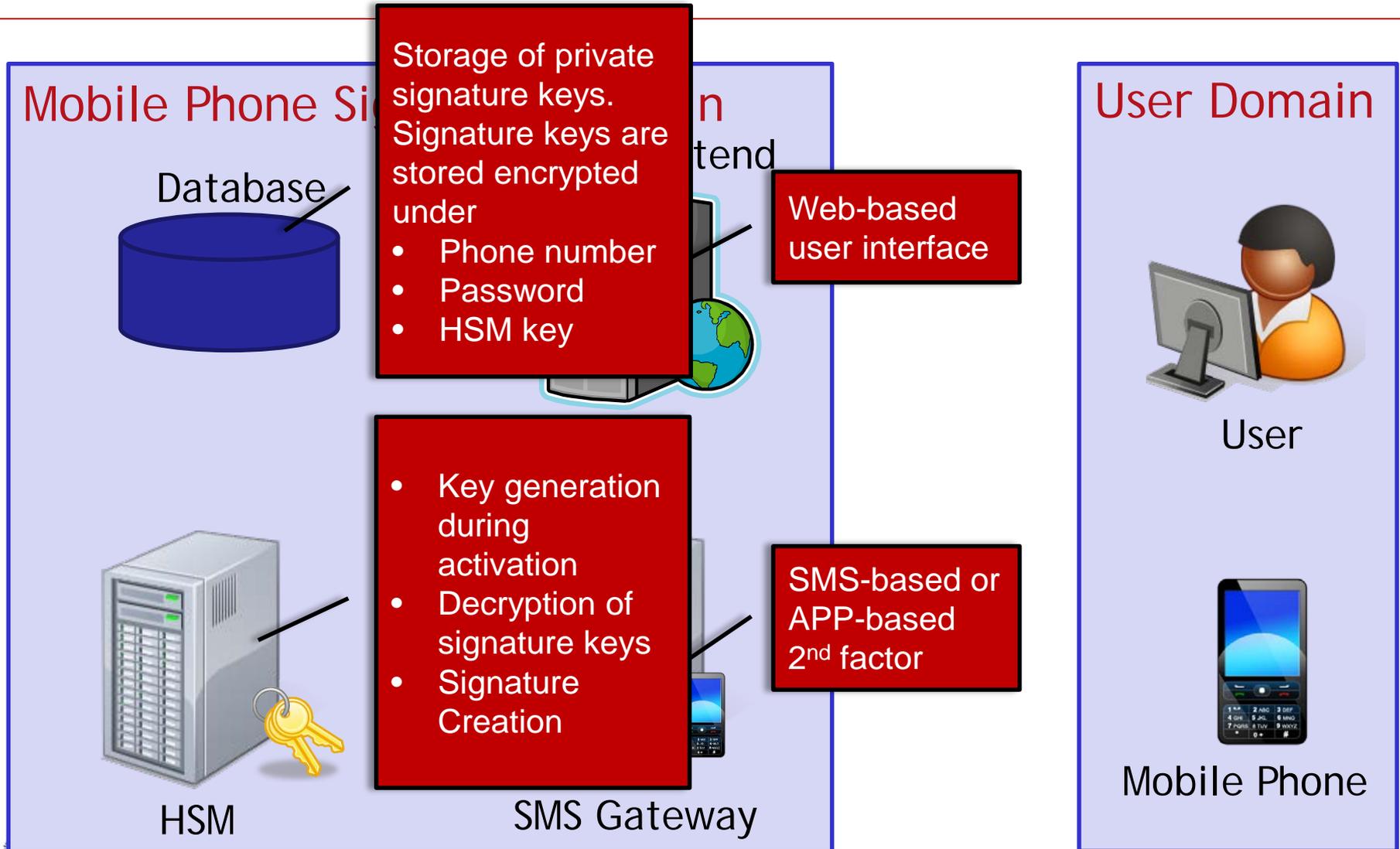
- Austrian eID Programme
- **Austrian Mobile Signature**
- Usage and Business Model
- Lessons Learned



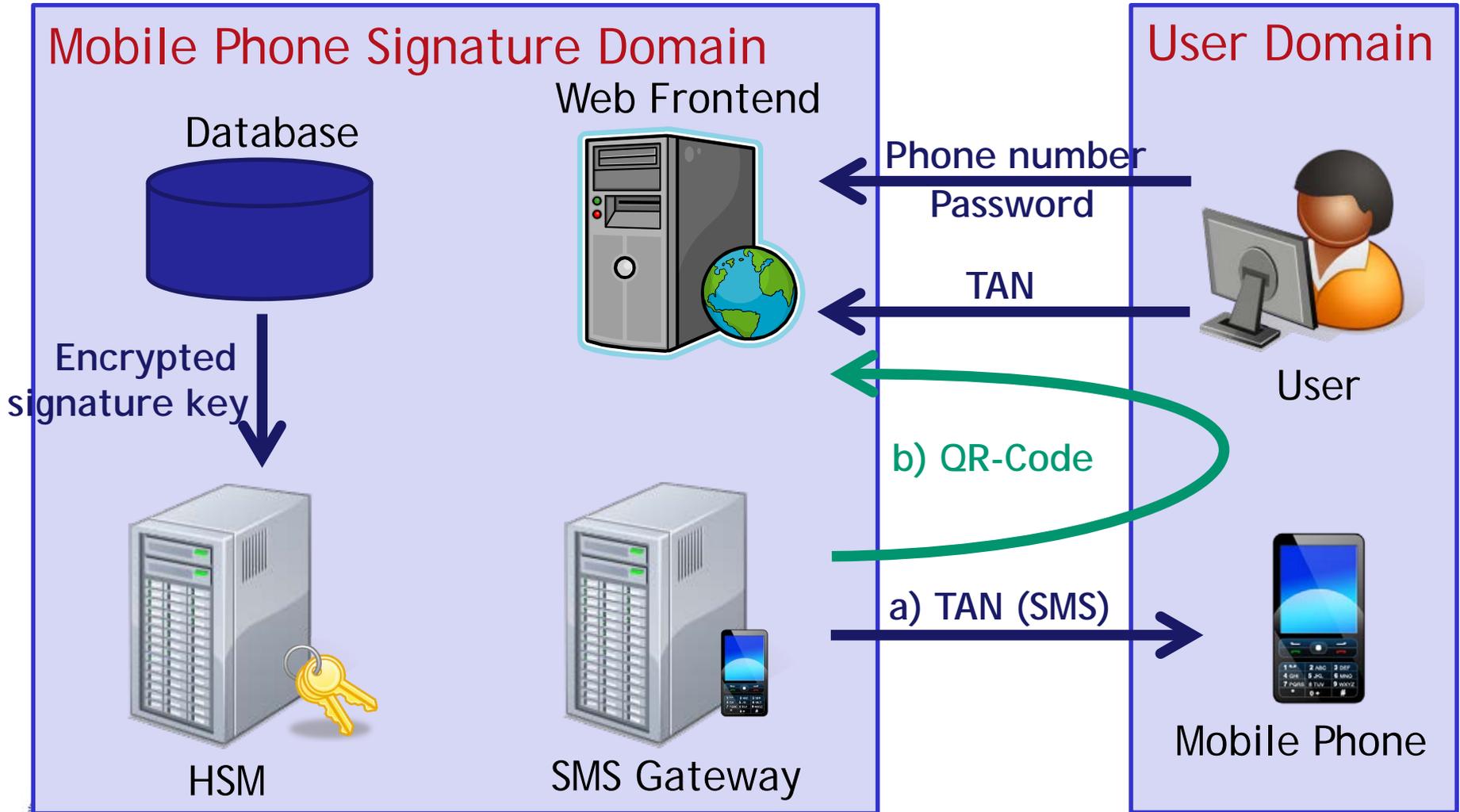
# The Basics

- Follows a server-based approach
  - Crypto-keys kept at a central server (HSM)
    - No changes in mobile phone or SIM
  - 2-factor authent. (knowledge and possession)
- Qualified Signature-Creation Device (QSCD)
  - Confirmed by notified body (*Signature-Directive / eIDAS*)
- Service operated by a trust service provider for qualified certificates

# The Architecture



# The Operation: a) SMS b) QR code



# Demo: Business Service Portal

https://www.usp.gv.at/Portal.Node/u Bundeskanzler... Unternehmensserviceportal

Anmelden > Registrieren

RSS-Feeds  
Gebärdensprache  
English

UNTERNEHMENSSERVICE PORTAL

Suche Home

Gründung  
Steuern & Finanzen  
Mitarbeiter  
Laufender Betrieb  
Gesundheit & Sicherheit  
Umwelt & Verkehr  
Außenwirtschaft  
IT & Geistiges Eigentum  
Förderungen & Ausschreibungen  
Übernahme & Auflösung  
Brancheninformationen

**Über das USP**  
Das USP ist das zentrale Internetportal der österreichischen Bundesregierung für Unternehmen und bietet direkten Zugang zu zahlreichen E-Government-Anwendungen sowie

**Über das Unternehmensserviceportal - USP**  
Das Unternehmensserviceportal (USP) ist das zentrale Internetportal der österreichischen Bundesregierung für Unternehmen und bietet direkten Zugang zu zahlreichen E-Government-Anwendungen sowie unternehmensrelevante Informationen.  
> mehr

**News / Newsletter**  
BMF: Stärkung des österreichischen Wohnbaus  
Produzierender Bereich mit leichtem Umsatzrückgang  
Personal Austria 2016  
> Alle News anzeigen

**Aktuelles Thema: Mitarbeit von Familienangehörigen**  
Das Unternehmensserviceportal informiert über die "familienhafte Mitarbeit", die es Familienangehörigen

**USP Service Center**  
> Antworten auf häufige Fragen  
> Kontakt



# Demo: Select Card or Mobile ID

https://www.usp.gv.at/uspLoginDAS/ Bundeskanzler... USP: Anmeldung

UNTERNEHMENSSERVICE PORTAL

**Anmeldung mit Bürgerkarte**

Handy Karte

lokale Bürgerkartenumgebung

**Anmeldung mit USP-Kennung** ?

Teilnehmer-Identifikation

Benutzer-Identifikation

PIN

Anmelden > Passwort / PIN vergessen

> Neu am USP? Infos zur Registrierung

**USP Service Center**

> Antworten auf häufige Fragen

> Kontakt



# Demo: Mobile ID dialogue

https://www.usp.gv.at/uspLoginDAS/ USP: Anmeldung

UNTERNEHMENSERVICE PORTAL

**Anmeldung mit Bürgerkarte**

Mobiltelefonnummer:  
0664xxxxxx

Signatur Passwort:  
●●●●●●●●

Identifizieren

Eigenes Fenster

USP Service Center

> Antworten auf häufige Fragen  
> Kontakt

> lokale Bürgerkartenumgebung  
> Anmeldung mit Bürgerkarte abbrechen

**Anmeldung mit USP-Kennung**

Teilnehmer-Identifikation

Benutzer-Identifikation

PIN

Anmelden > Passwort / PIN vergessen

> Neu am USP? Infos zur Registrierung

**From here 2 variants:**  
a) SMS one-time-code  
b) QR code app for smartphones



# Demo: Variant „b“ - QR Code App

The image displays a web browser window and a mobile phone. The browser window shows the 'UNTERNEHMENSERVICE PORTAL' with a login section for 'Anmeldung mit Bürgerkarte'. This section includes a 'Vergleichswert: U7+TZIEig5', a QR code, and options for 'Eigenes Fenster' and 'TAN via SMS anfordern'. Below this is a section for 'Anmeldung mit USP-Kennung' with input fields for 'Teilnehmer-Identifikation', 'Benutzer-Identifikation', and 'PIN'. The mobile phone displays the 'HANDY-SIGNATUR A TRUST' app interface, showing 'AKTUELLE TAN' with a QR code and a 'DOKUMENTE ANZEIGEN' button. Blue circles highlight the QR codes and the 'DOKUMENTE ANZEIGEN' button on both screens.

# Demo: Representation information

The screenshot shows a web browser window with the URL <https://www.usp.gv.at/attrLv15/ImpLc>. The page title is 'USP: Unternehmen auswähl...'. The main content area is titled 'Unternehmen auswählen' and contains the following text: 'Bitte wählen Sie das Unternehmen aus, für das Sie jetzt tätig werden wollen.' Below this, there are two radio button options:

- Stiftung Secure Information and Communication Technologies - SIC**  
8010 Graz  
Teilnehmer: 14217749u807  
Benutzer: hleitold1
- Leitold Herbert DI**  
8010 Graz  
Teilnehmer: 211904b48256  
Benutzer: bk050idy

At the bottom of the selection area are two buttons: 'OK' and 'Abbrechen'. A large blue arrow points from the left towards the 'OK' button. To the right of the selection area is a sidebar titled 'USP Service Center' with links for '> Antworten auf häufige Fragen' and '> Kontakt'.



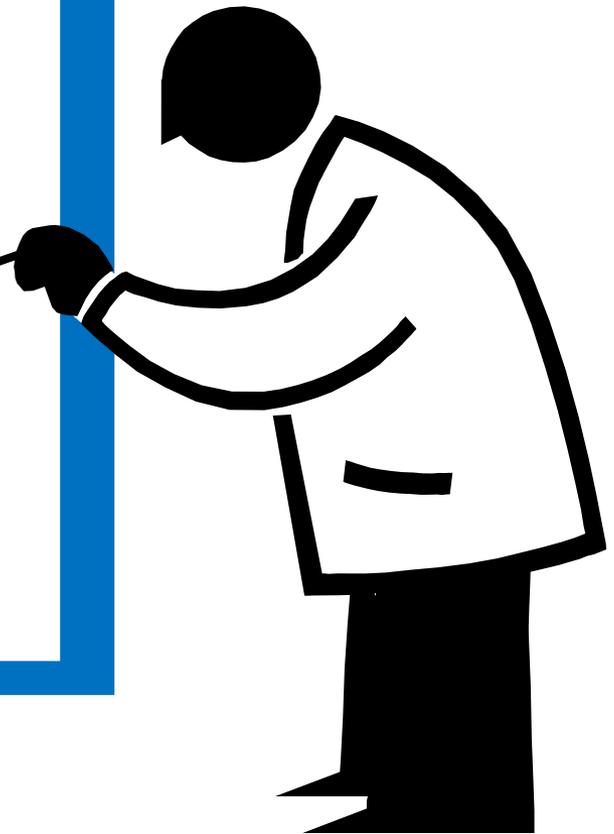
# Demo: Done

The screenshot shows the Austrian Business Service Portal (Unternehmensserviceportal) in a web browser. The address bar displays the URL <https://www.usp.gv.at/Portal.Node/u>. The browser's address bar and the page's main header are circled in blue. The page content includes a navigation menu with categories like 'Formulare', 'Gesetzliche Neuerungen', and 'Alle Themen'. Below the menu is a search bar with the text 'Suche' and 'Home'. The main content area features a large image of a pen writing on a document, followed by a section titled 'Anleitung zur USP-Administration' with a keyboard icon. To the right, there is a 'Mein USP' section with a green square logo and a list of links: '> Unternehmensdaten anzeigen', '> Administration aufrufen', '> Logo ändern', and '> Unternehmen wechseln'. A sidebar on the left contains a list of topics such as 'Gründung', 'Steuern & Finanzen', and 'Mitarbeiter'.



# Contents

- Austrian eID Programme
- Austrian Mobile Signature
- **Usage and Business Model**
- Lessons Learned



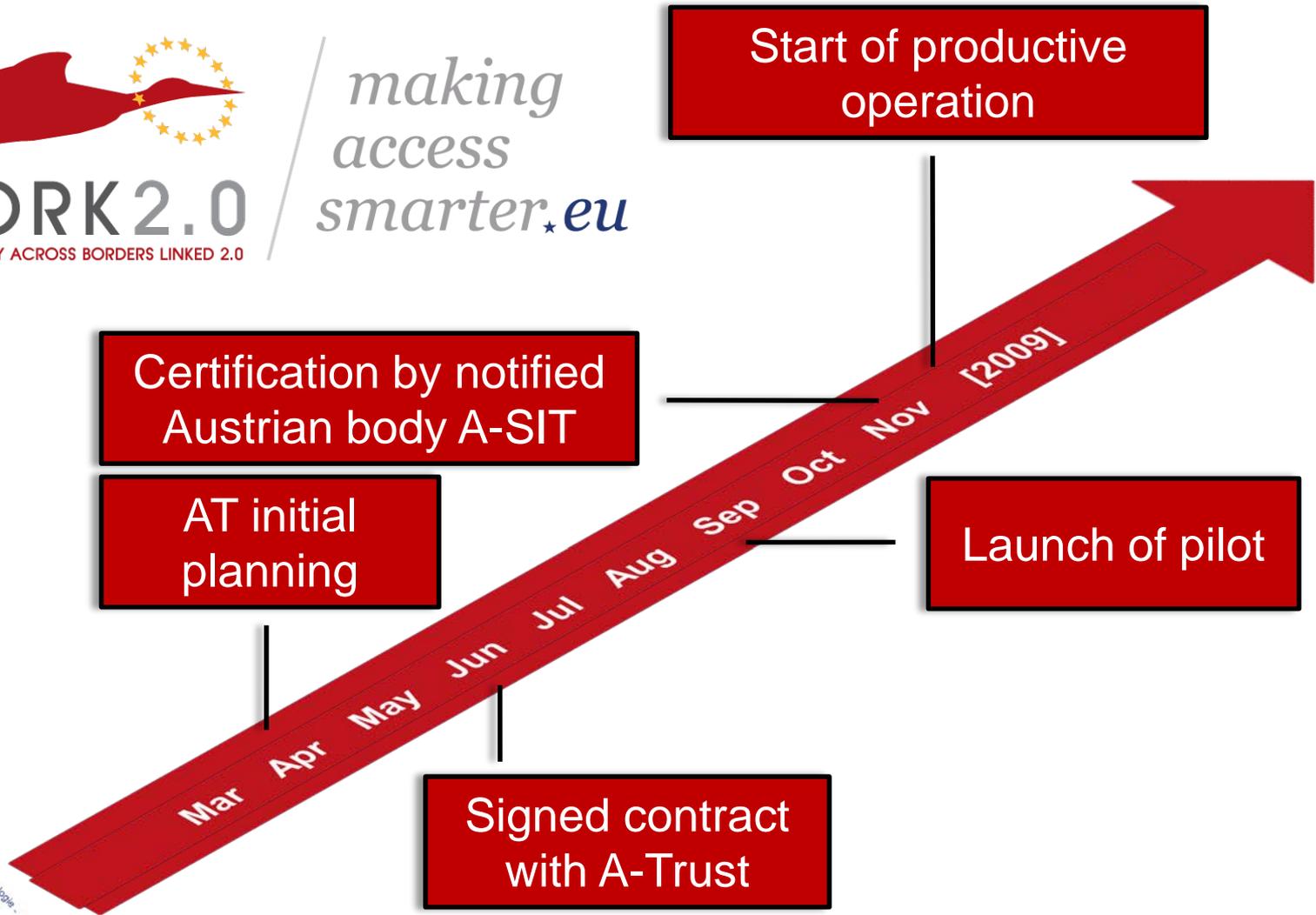
# Mobile ID initial design considerations

- Easy to use, no additional effort for citizens
  - E.g., no change of SIMs
- Independent from mobile device and MNO
  - Server-based credentials, Web-based approach
- Gvmnt. has interest in broad take-up
  - Free of charge for citizens
    - as it is the case for health card eID
  - No costs for public or private relying parties
  - qualified certificates and SMS costs paid by gvmnt.

# Deployment (through STORK LSP)

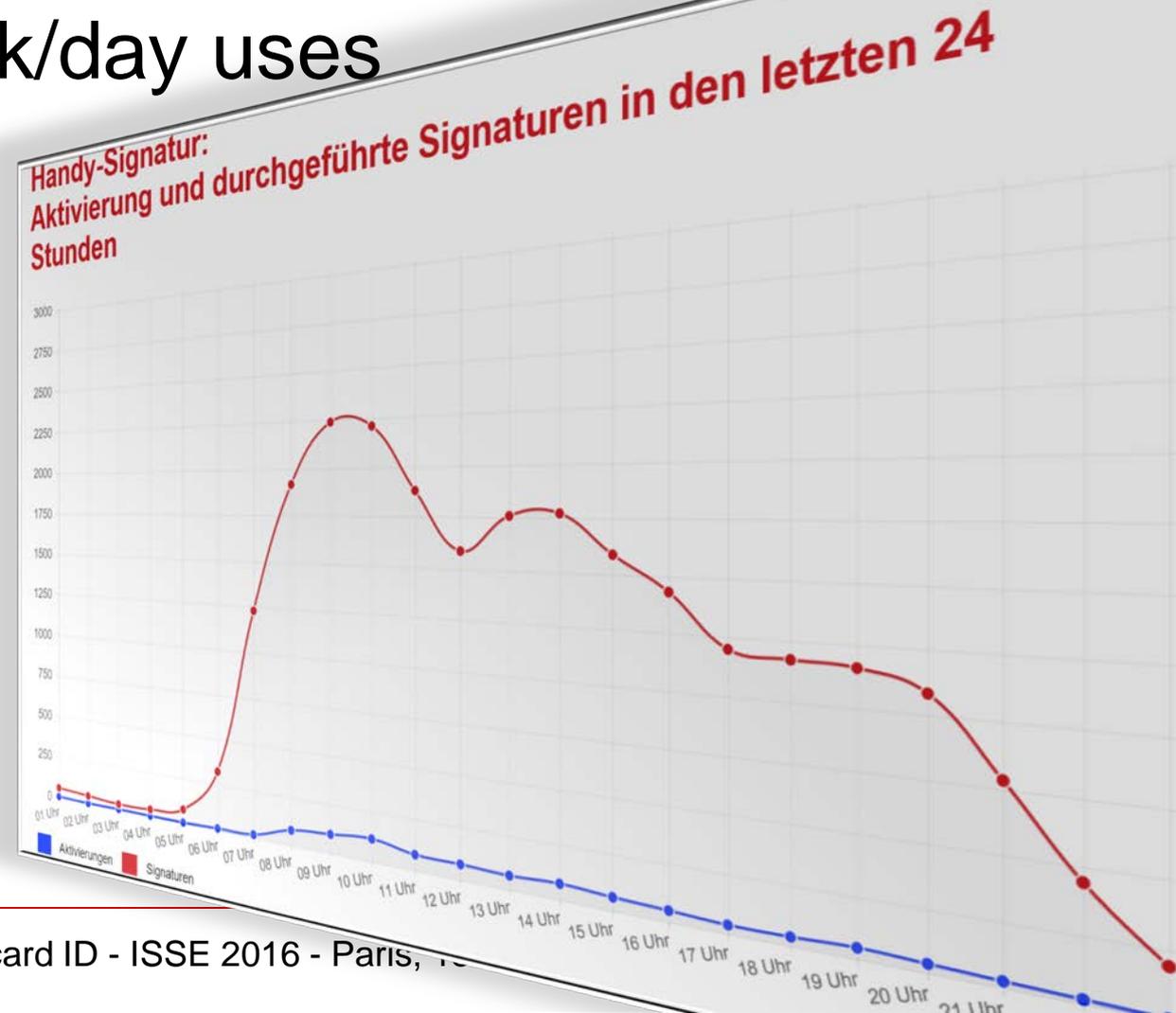


*making  
access  
smarter.eu*

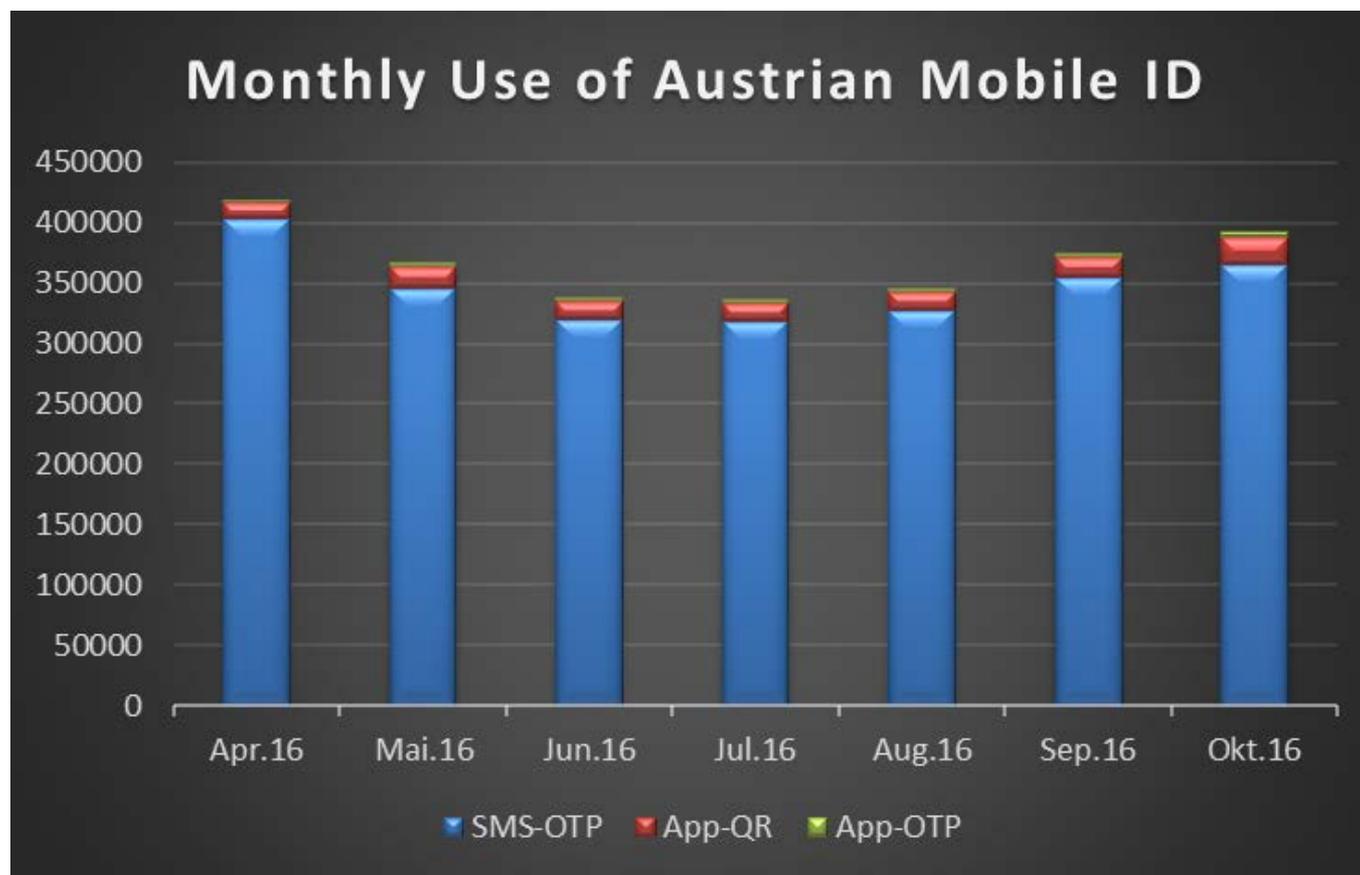


# Actual usage ...

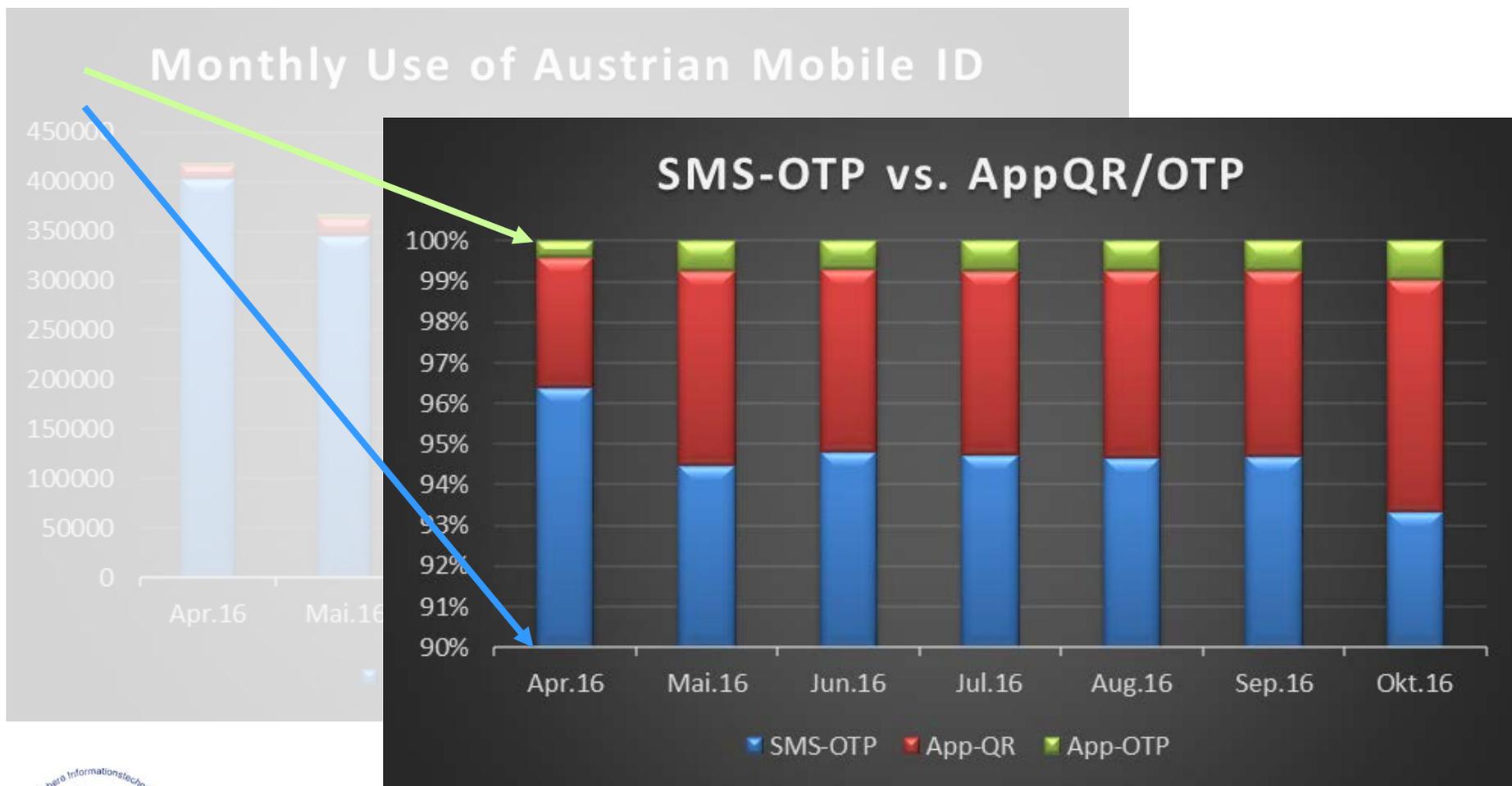
- About 15-25 k/day uses on a typical working day
- ~4-6 k/day uses on weekends



## ... actual usage (cntd.)



# Zooming into SMS vs. Smartphone App

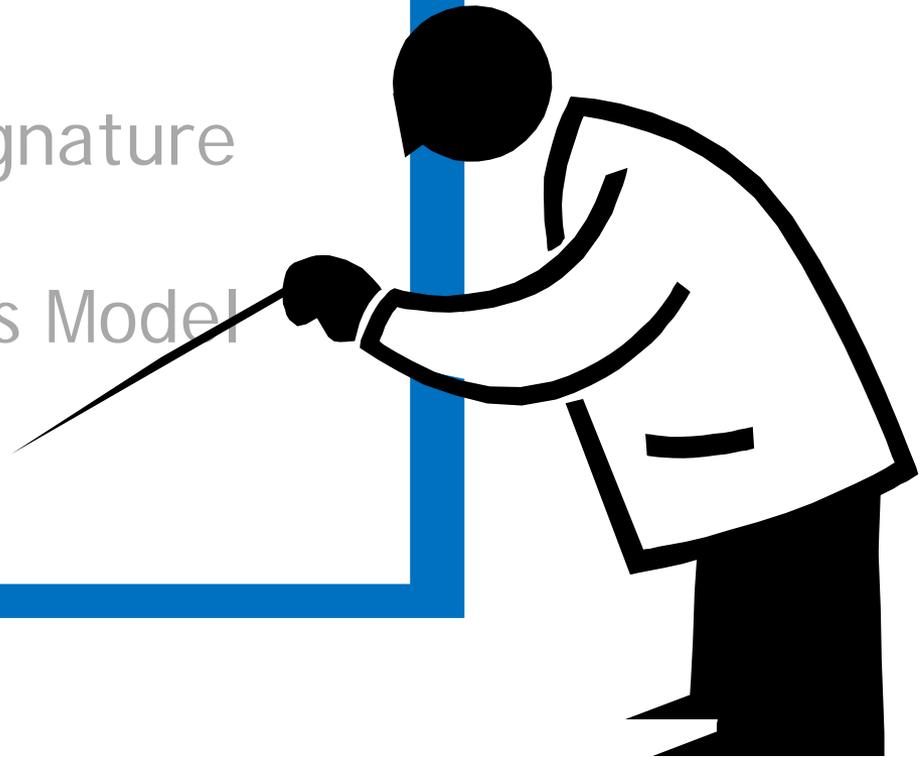


# Core promotional milestones



# Contents

- Austrian eID Programme
- Austrian Mobile Signature
- Usage and Business Model
- **Lessons Learned**



# Lessons learned on smartcard eID



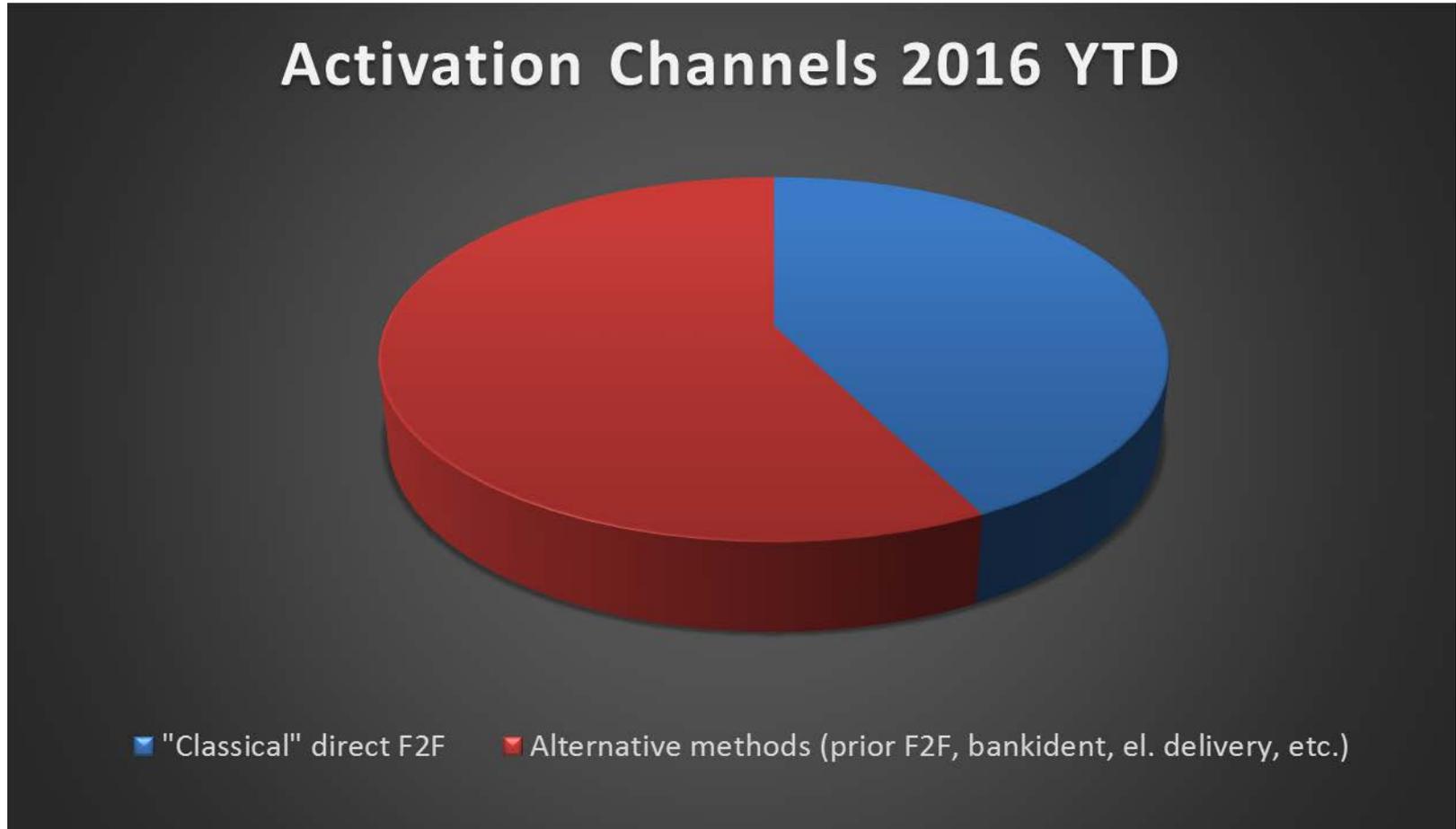
- it needs a card reader
- it needs integration with (all!) OS
- it lacks integration with (all!) browsers
- it needs software on the PC / tablet
- Java-applets helped out, but are gone

# Lessons learned

- Smartcard eID
  - Satisfactory business users take-up
  - But quite limited take-up by citizens
- Mobile signat. clear preference by citizens
  - 2014/15/16: 15/10/24 times higher mobile ID activation to health card activation
    - Under comparable conditions like free of charge
- Ease of use and easy activation essential



# Joice of convenient registration is essential



Thank You  
for Listening!



Herbert Leitold  
ISSE 2016  
Session “Mobile Security”  
Paris, November 15<sup>th</sup>, 2016