

Leading Swiss Bank Case Study

Mobile Banking Seminar

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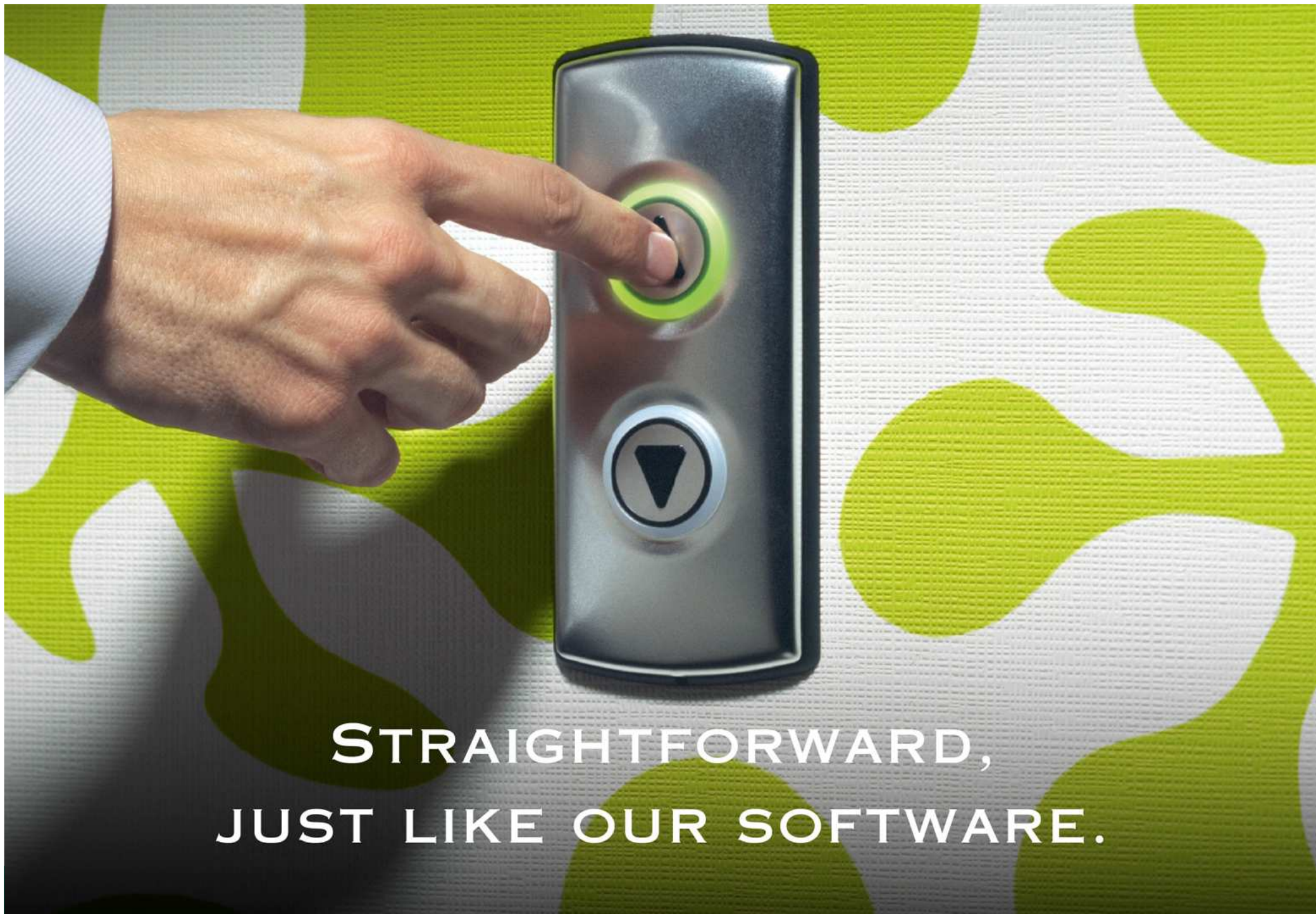
Chief Integration & Security Officer, AdNovum

October 12, 2012



swiss made
software





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Agenda

Leading Swiss Bank Case Study

- How it all evolved
- Key application features & user interface
- Mobile banking release 1
 - Project plan
 - Results
- Integration & architecture
- Security
- Non-functional characteristics
- Current usage statistics
- Recommendations from lessons learned



Leading Swiss Bank Case

■ UBS AG

- 150 years old, with a global presence in more than 50 countries
 - Largest retail bank in Switzerland
 - One of the largest wealth management banks globally
 - > 60'000 employees, 12% in Asia
-
- AdNovum is one of only six preferred vendors of UBS
 - UBS is AdNovum's largest customer


A long and successful relationship

First steps into Mobile Banking

UBS Locator

By UBS AG

Open iTunes to buy and download apps.



[View In iTunes](#)

This app is designed for both iPhone and iPad

Free

Category: Finance

Updated: Oct 02, 2012

Version: 1.3.1

Size: 1.6 MB

Languages: English, French, German, Italian

Seller: UBS AG

© UBS AG

Rated 4+

Requirements: Compatible with iPhone, iPod touch, and iPad. Requires iOS 4.2 or later.

Customer Ratings

We have not received enough ratings to display an average for the current version of this application.

All Versions:

★ ★ 22 Ratings

Description

If you're on the road and need to locate a UBS branch, the UBS Locator App will help you do so quickly and easily.

Just open the application (an Internet connection is necessary for it to function) and search for the branch near you

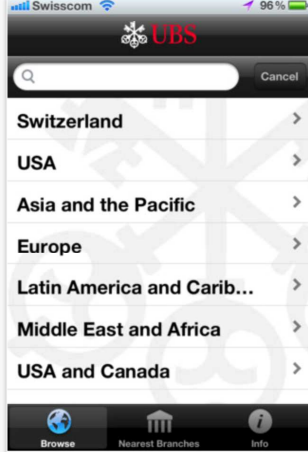
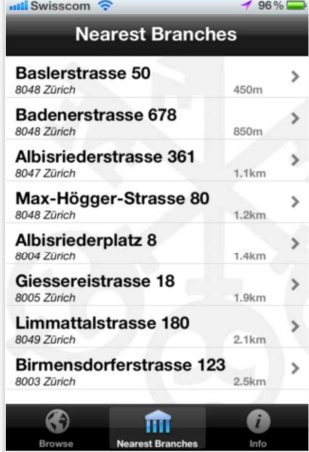
[UBS AG Web Site](#) [UBS Locator Support](#)

What's New in Version 1.3.1

- Fix for location database update issue
- Ability to select either Miles or Kilometres as distance unit of measurement
- Added "Nearest branches" table to iPad app

Screenshots

iPhone | iPad

iPhone Apps

See All >



UBS Mobile Banking
Finance
Updated 02 October 2012
FREE



UBS Mortgages
Finance
Updated 27 March 2012
FREE



UBS Locator
Finance
Updated 02 October 2012
FREE



UBS KeyClub
Lifestyle
Updated 26 September 2...
FREE



UBS Research
Finance
Updated 10 July 2012
FREE



UBS Funds
Finance
Updated 05 July 2012
FREE

iPad Apps

See All >



UBS Locator
Finance
Updated 02 October 2012
FREE



UBS KeyClub
Lifestyle
Updated 26 September 2...
FREE



UBS EQY Investor
Finance
Updated 06 January 2012
FREE

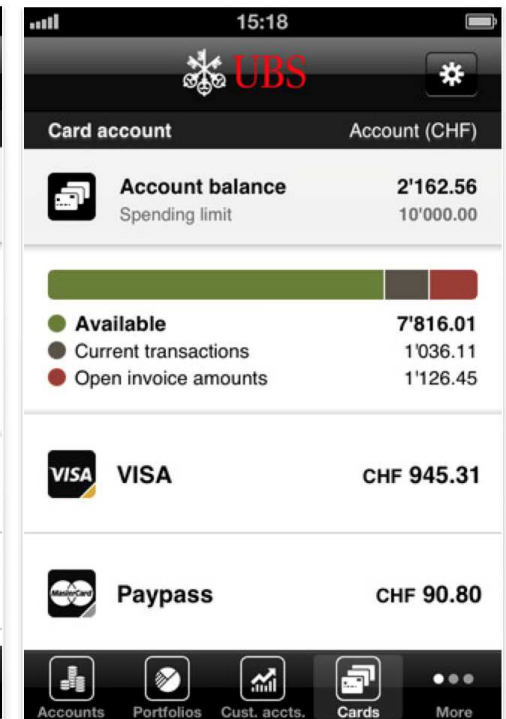
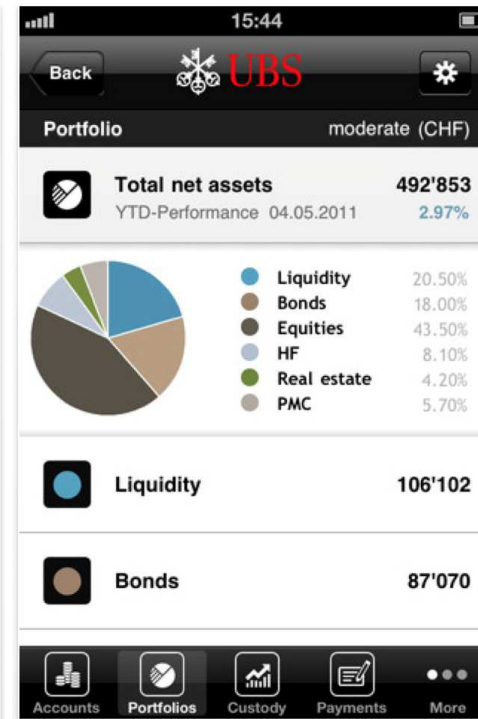
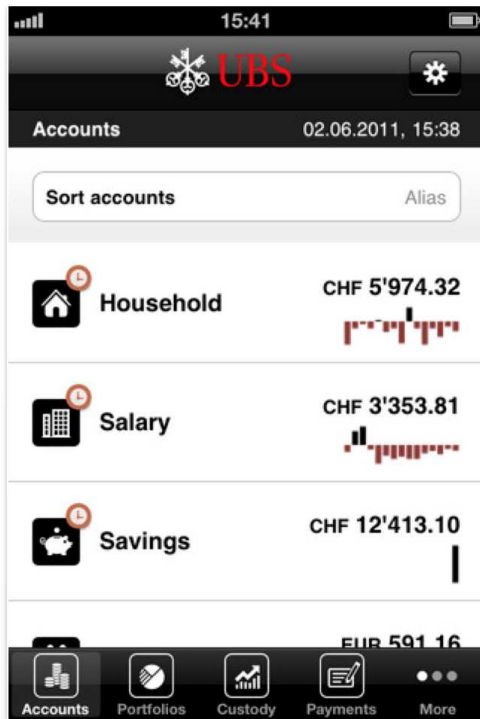
- First approaches:
native, standalone applications
- Several mobile applications popped up
in different departments
- Need for a coordinated Mobile program
 - Common look and feel
 - Clear separation of concerns

Mobile Banking – Functional Scope

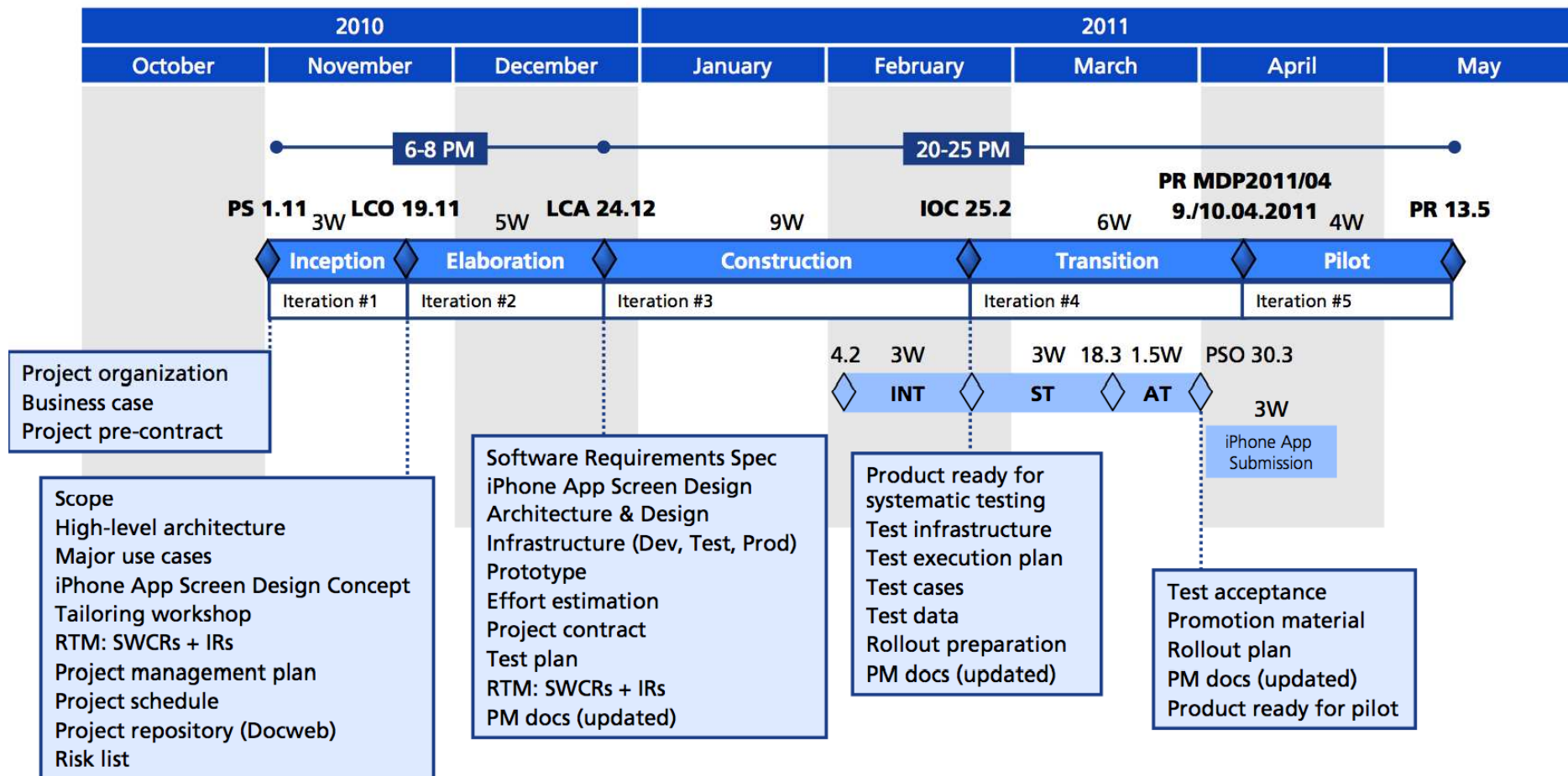


- Account balances
 - Latest account transactions
 - Portfolio overview by asset class
 - Detailed information on individual custody account and portfolio positions
 - Credit card transactions and amount still available
 - Open credit card invoice amount
 - Completed exchange and securities transactions
 - Scanning of payment slips
(optimized for iPhone4 and only for clients domiciled in Switzerland)
 - SMS Pull: query the account balance by SMS, authenticated by mobile number
-
- Precondition: existing e-banking contract
 - Activated out of e-banking session
 - Available for iPhone 3GS/4x/5 (iOS 4 and higher), as well as Android

Mobile Banking – User Interface



Mobile Banking Release 1 – Project Plan

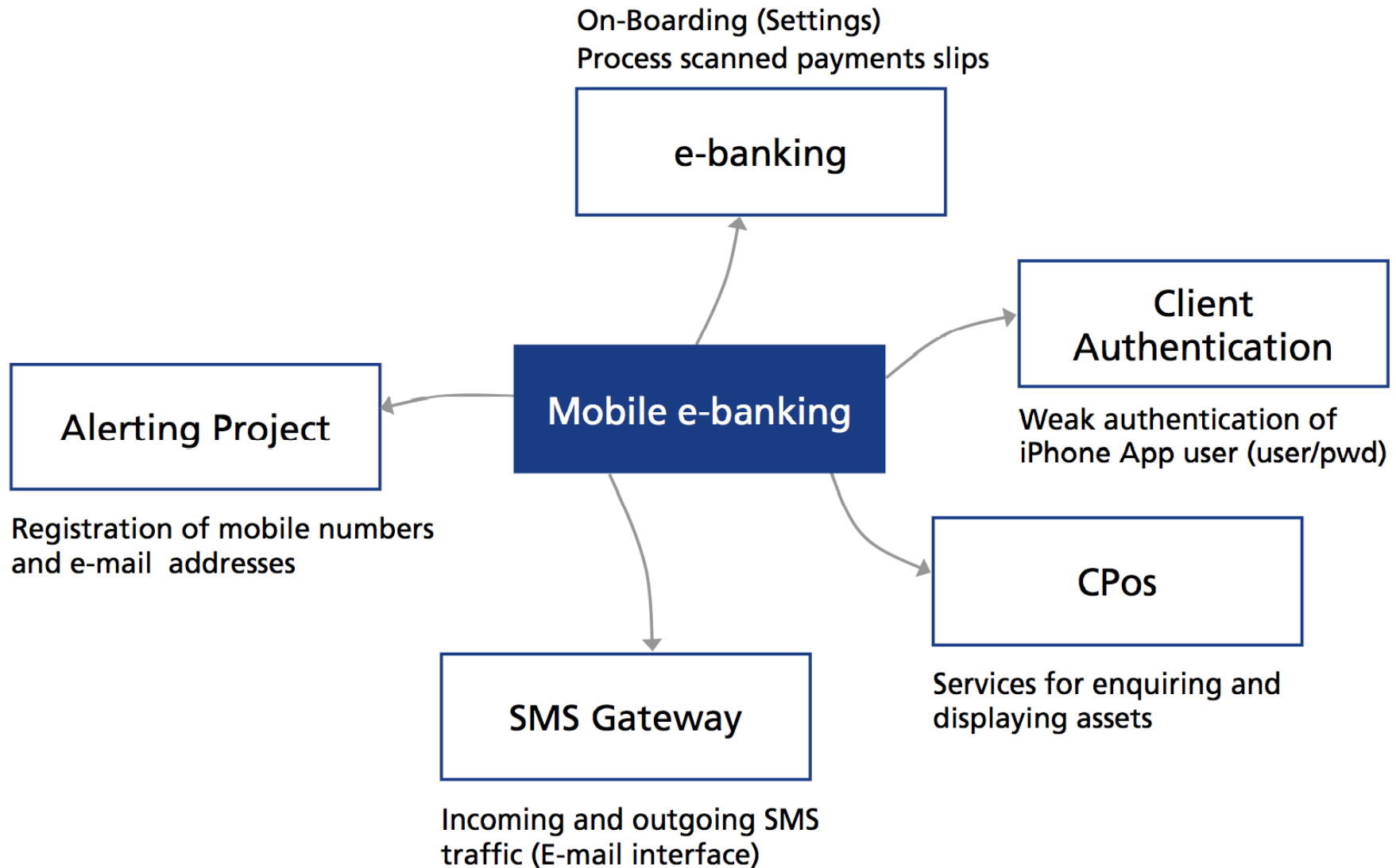


Mobile Banking Release 1 – Results

- Approval by Apple without rejection within one week
 - 14'000 downloads within first week
 - Rating 4.5 (top of Swiss Bank Apps)
 - No operational issues
 - Very positive user feedback despite still limited functionality
-
- Desire
 - To extend the solution
 - To provide an Android application



Release 1 – Dependencies

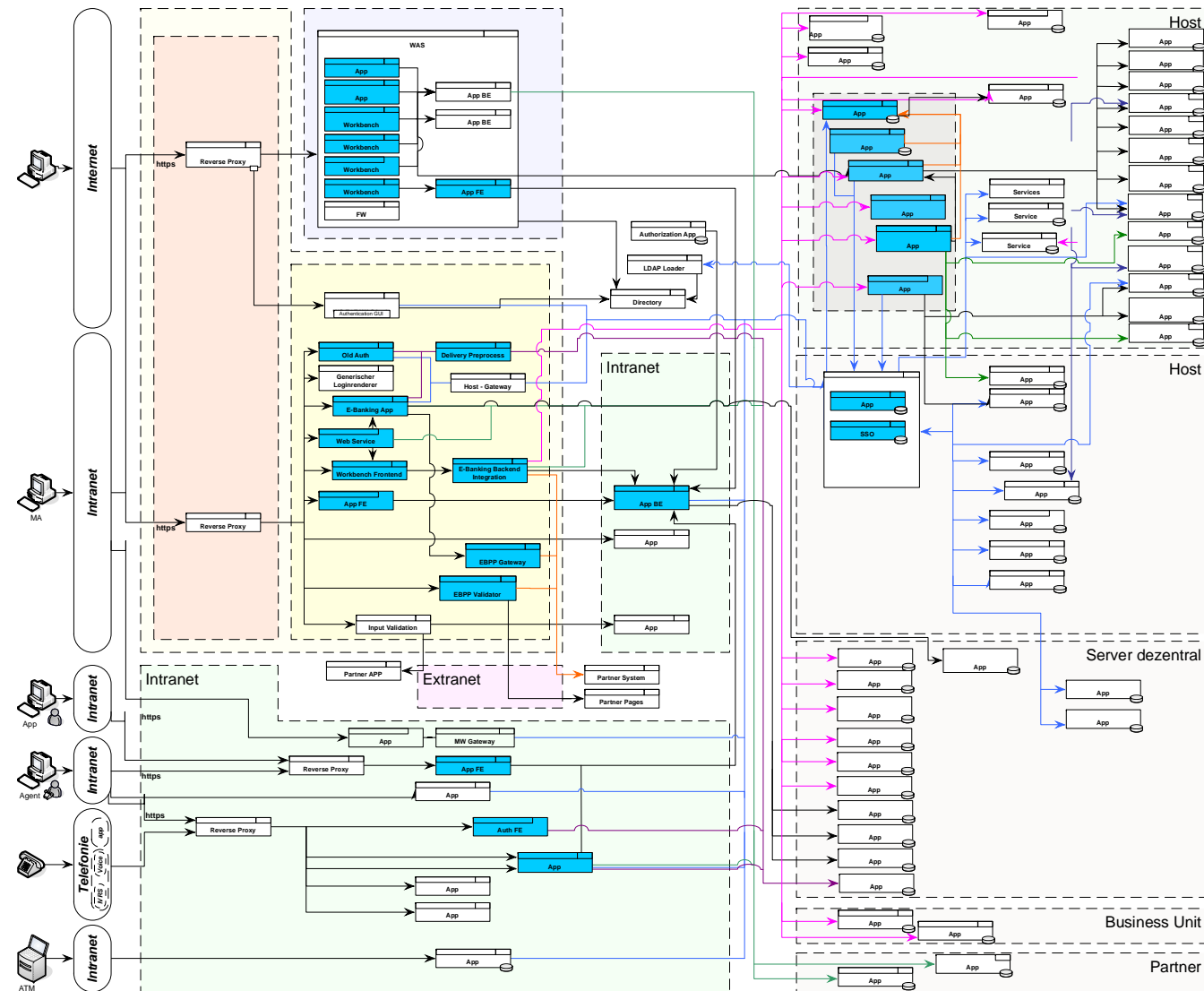


Integration into existing Application Landscape

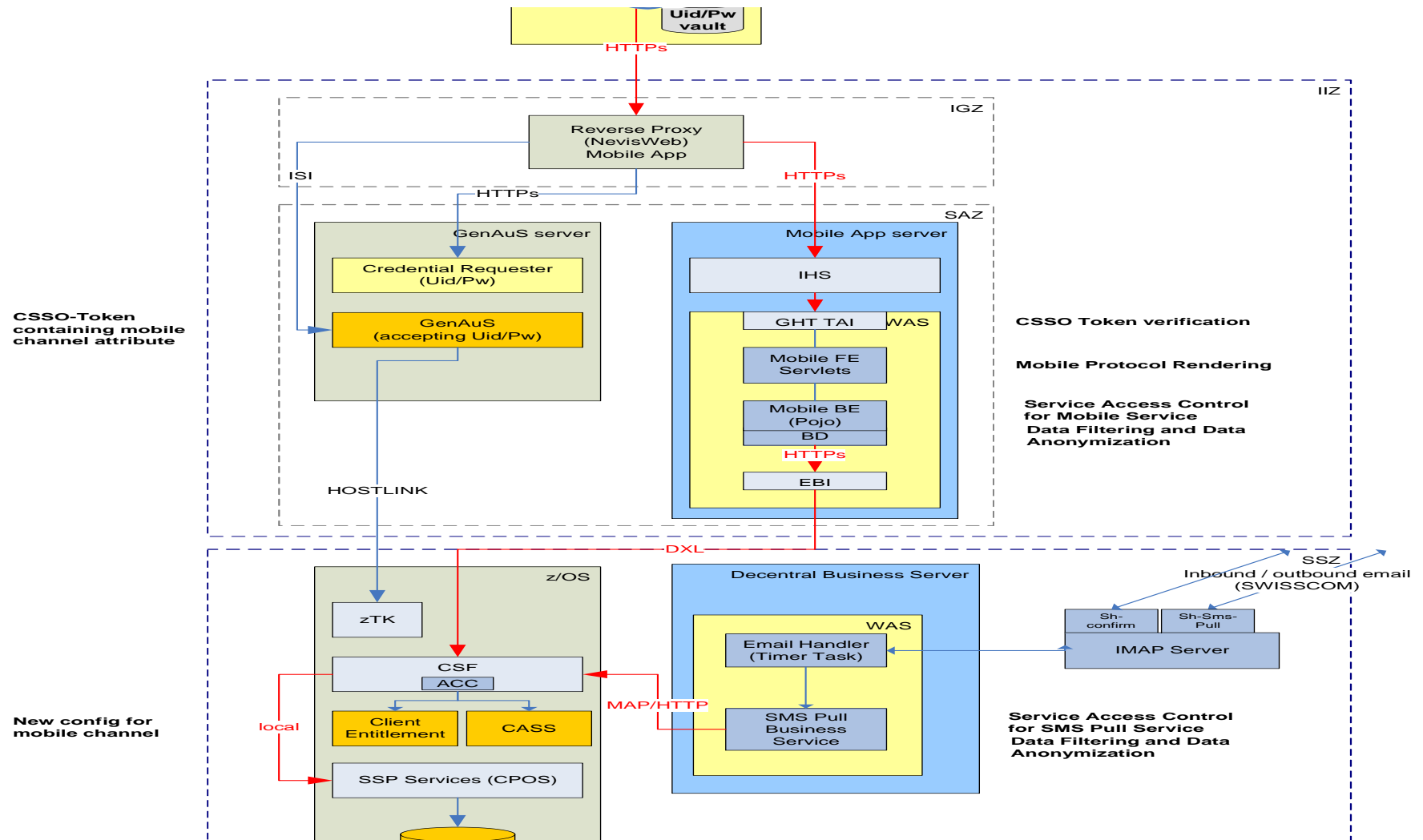
Existing internet access system:

- Service-oriented
- Network zoning
- Backend:
Cobol on IBM host
- Frontend:
Java on Unix
- Channels:

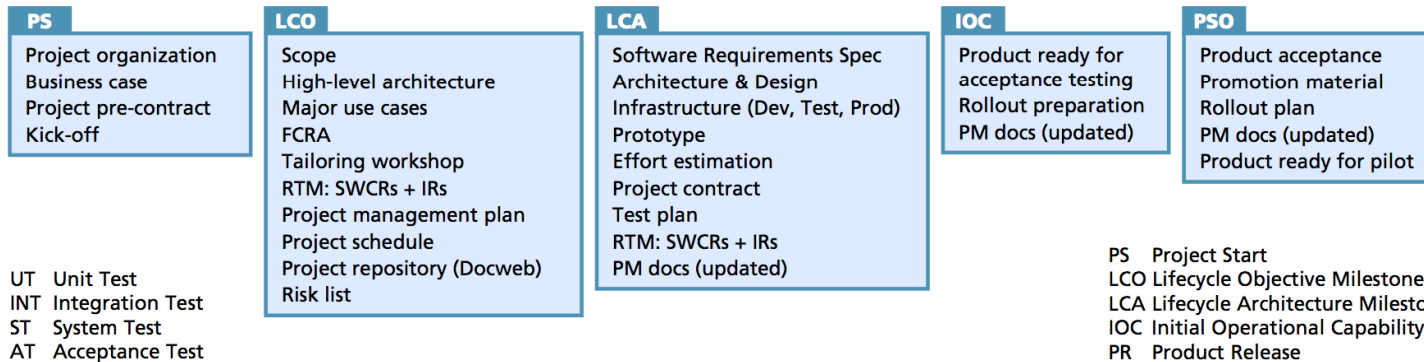
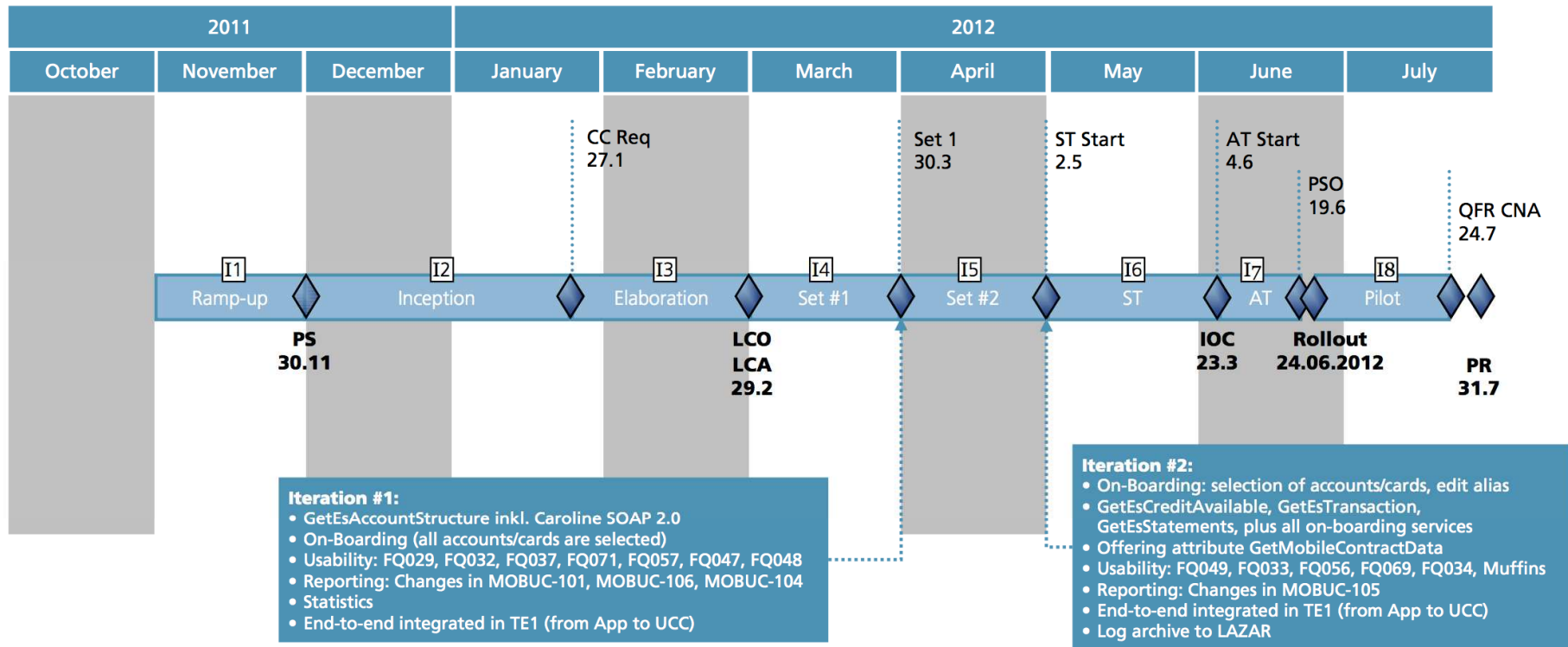
- Internet
- Intranet
- Phone
- Mobile



Mobile Banking Architecture



Release 2 – Milestones



Security

- **Identity Management**

- Same as with e-banking (e-banking contract as a precondition)

- **User Authentication**

- Access card and card reader with PIN
- Strong authentication with offline challenge/response

- **Privacy**

- Data encryption with 128 bit (IDEA/RC4) resp. 168 bit (3DES)

- **Transport Layer Security (TLS)**

- Use of protocol mechanism, e.g. SSL with HTTP

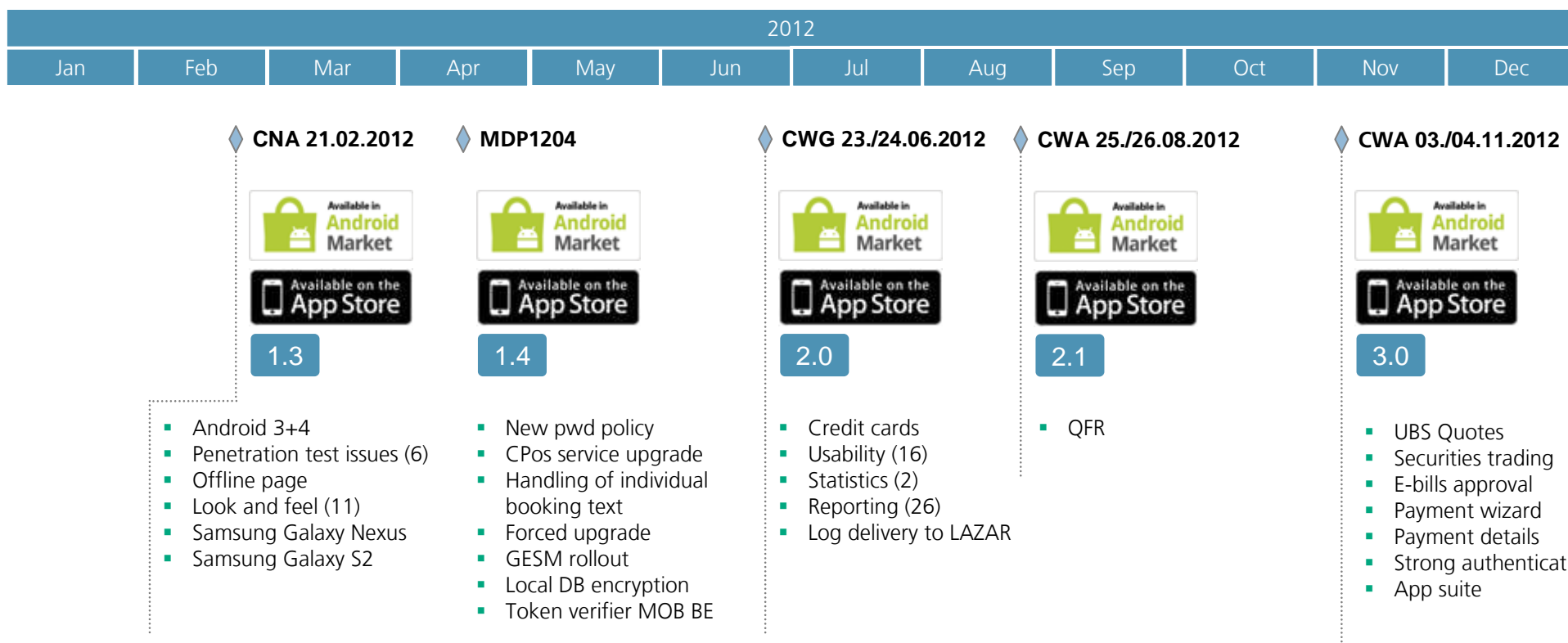
- **Identity Propagation**

- Security tokens issued by nevisAuth
- Security tokens propagated via SOAP headers
- Use of JAX-WS handlers to pass the security tokens

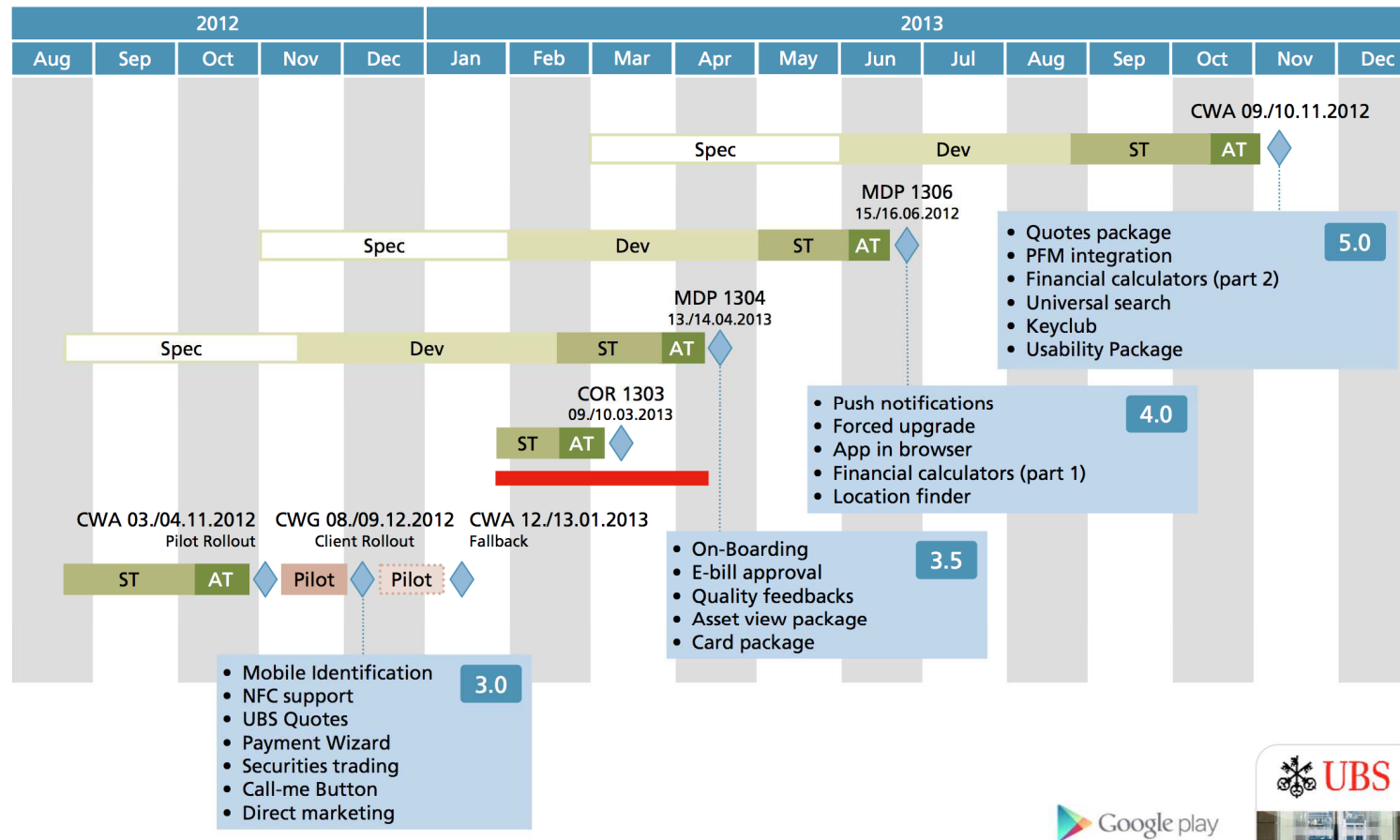
Non-Functional Characteristics

Non-Functional Characteristic	Value
Number of users	720'000
Concurrent users	2'500
Growth rate (p. yr.)	8-11%
Max. response time login	< 10 sec
Max. response time simple transaction	< 2 sec in 95% of cases
Transaction volume per month	36'800'000
Number of logins per month	3'750'000
Service time	7 * 24 h
Availability	99.5%
Max. time of non-availability	2 h

Release Plan 2012 and Outlook



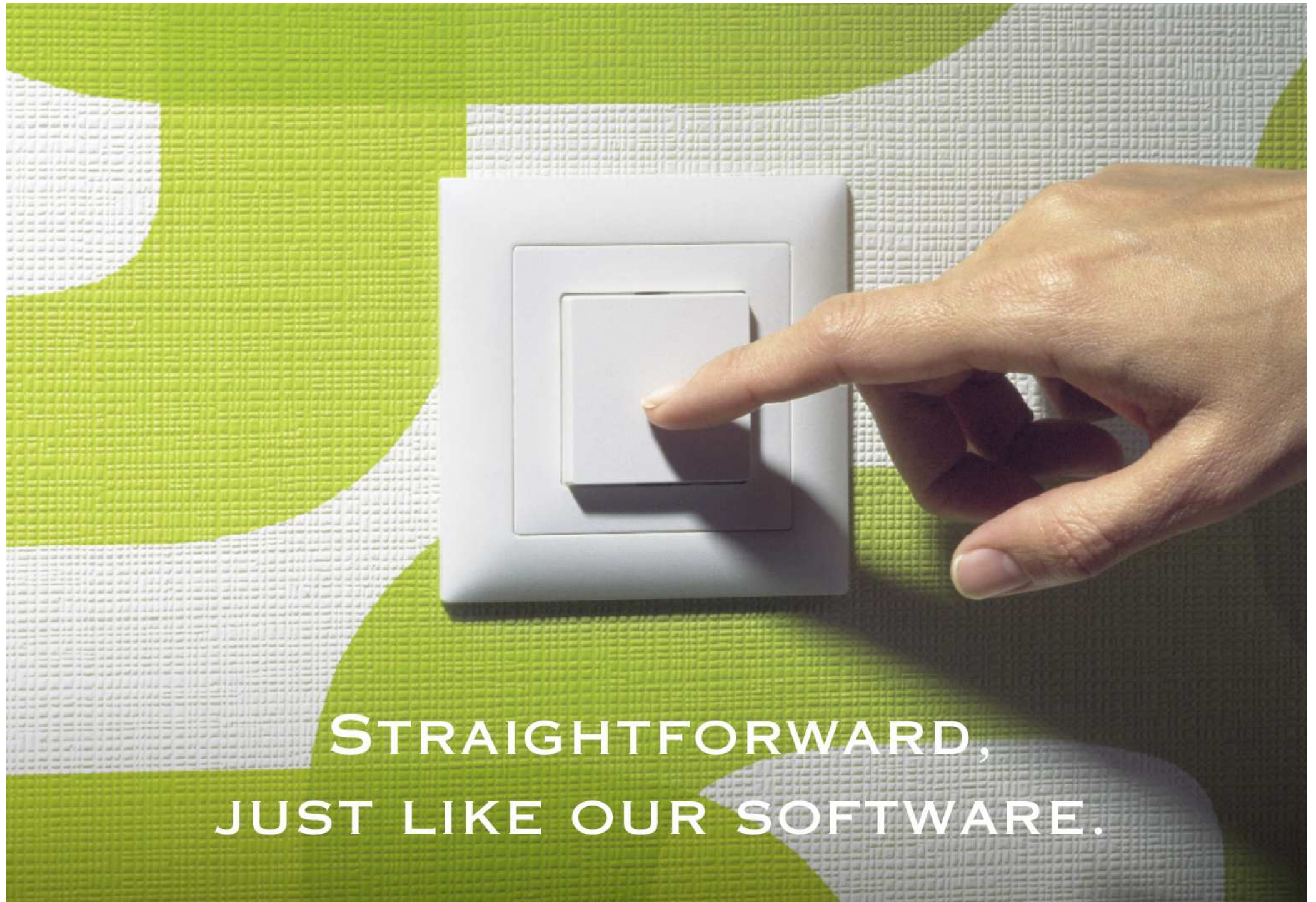
Roadmap



Consolidate e-banking and Mobile Banking offerings in WM EMEA
Leverage Mobile Banking in WM APAC

Recommendations from lessons learned

- A service oriented system architecture enables to add Mobile Banking with minimal costs by reusing existing functionality
 - > reuse functionality over different channels
- A smooth integration into the existing IT environment is key
 - > use web technology with modern Web standards (HTML5 / CSS3)
- Hybrid approach enables reuse of business logic over different devices and therefore reduces development and maintenance costs.
 - > avoid native development on each device wherever possible
- Reduce dependencies to AppStore and mobile OS providers as much as possible
 - > again: stay with standard web technologies such as HTML5/CSS3
- “Security issues” is rather about convincing people than technology.
 - > don’t trust the client platform
- Continuous development and maintenance is important in order to quickly and continuously react to new devices (iPhone5) and mobile OSs (e.g. iOS6)
- Get better over time: Build and continuously extend an automated QA-environment running regression tests
- Ensure a capability to deliver an emergency release within hours
- Save money by choosing a sustainable and evolutionary approach based on people with the necessary skills and experience



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