

Whitepaper



# Mobile Banking

## Status and Future Trends in Retail Banking

Version 1.0 – May 2010

**Author**

Georg Hildebrand

**Address**

GFT Technologies AG

Mergenthalerallee 55

65760 Eschborn

Germany

T +49 6196 969-0

F +49 6196 969-1001

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## 1 Management Summary

Currently, most companies consider mobile banking the younger brother of online banking. While some financial service providers still do not offer mobile banking at all, others already use it as an additional sales channel. Many providers only offer the basic functionalities (a “me too” approach), such as checking current account information. This approach does not even come close to exhausting the special functions available through the mobile terminal with its specific use scenarios. The high performance capabilities of mobile terminals continue to eliminate the boundaries between PCs and telephones. Current surveys confirm that it is specifically the younger generation that is considerably more open to the new mobile application possibilities.

Financial service providers should therefore start preparing themselves to meet the demands of tomorrow and to begin developing a strategy for providing the best service for this new generation of devices and users. This does not simply mean transferring the business processes used for online banking. Instead, the only way for providers to maintain their presence and their share of the market is to restructure their business processes to better suit mobile devices

Mobile banking introduces brand new possibilities for financial service providers to brand a bank, such as the constant visibility of direct banks. Moreover, mobile banking enables more efficient customer loyalty measures, made possible by individual customer management and innovative strategies for product sales.

This whitepaper will provide information on the current status in the field of mobile banking and will introduce new approaches to mobile banking. In doing so, user scenarios from provider and customer points of view will form the core basis for the future structure of business processes in the field of mobile banking.

## 2 Current Situation

The importance of mobile banking has continued to increase since 2009. The number of users is still rather small compared to online banking. However, tests performed in individual banks have shown a trend that is directly correlated to the pervasive use of the Apple iPhone which will lead to considerably increased use.

The use of mobile banking in retail banking represents a major challenge, as the established online banking business processes cannot merely be transferred to the field of mobile banking. Instead, the new processes and functionalities used in mobile banking must be integrated into the existing process landscape.

### 2.1 What Mobile Banking Means for the Business Models Used in Retail Banking

According to GFT, once mobile banking is understood as a significant channel of communication between a bank and a customer, the business model of the respective bank will have a considerable influence on the use and the potential of mobile banking. The decisive factor in this case will not be the size of the bank or its balance sheets, but its presence on the market.

#### 2.1.1 Branch Office Banks

Branch office banks can use their comparatively solid branch networks for targeted customer loyalty measures. Thus, the proximity of a branch office to a customer's home or workplace is still a major, if not the most important, criteria when selecting a principle bank. The presence of a branch office bank accords it a "face" and creates an emotional connection between the customer and the company. A branch office ensures the availability of cash to its customers and offers personal consulting services; the bank customer is thus willing to accept lesser conditions in return for these services.

Even though branch offices are able to provide sufficient customer support through their network of banks, a look behind the scenes reveals that these companies are also actively promoting the idea of mobile banking. Mobile banking may represent a serious challenge to branch offices in the near future, as the pressure from the competition of direct banks continues to increase. The more direct banks become involved with the targeted use of mobile banking, the more they will be able to increase their presence and the intensity of their customer support.

#### 2.1.2 Direct Banks

The challenge for direct banks is the idea of branding and the targeted visibility with end customers. Since direct banks have either no or very few branch offices, they are much less visible to customers than branch office banks. This, in turn, means that a customer will have weaker emotional connection and will be more likely to change banks. Thus, conditions and special offers are a core competitive feature of such companies.

Mobile banking offers direct banks the possibility to considerably enhance their competitive situation in spite of a lack of on-site presence. Mobile banking can be used to enhance customer loyalty far beyond the mere conditions being offered. With the Smartphone, customers now carry their banks in their pockets and are thus in a position to receive consulting services or to actively get information at any time. The core challenge for direct banks when it comes to mobile banking is

therefore to structure their business processes in an innovative way and to specifically generate value-added services.

## 2.2 Increased Use of Mobile Terminals, How They Are Used

Statistics show that more and more users carry their cell phones with them on a regular basis and use them for an increasing number of tasks. In 2009, for example, there were 113 million mobile phone accounts in Germany, indicating a larger number of accounts than inhabitants. This is further supported by the sinking costs for mobile data communication.

Due to their increasing performance, mobile terminals are taking on the status of a second or third PC. Today's users often find it more convenient to use their cellular phone to check traffic conditions, cinema schedules or even their account balances, rather than to start up a computer.

## 2.3 What Mobile Banking Means from Today's Perspective

Both GFT, as well as market research companies such as Forrester or DB Bank Research, have created analyses to evaluate the growth of the mobile banking market, in order to assess the current situation.

### 2.3.1 Results of an Analysis Performed by GFT in October 2009

In autumn of 2009, GFT conducted a survey at different financial institutions on the topic of mobile banking. The objective was to determine the current opportunities and risks for mobile applications from a financial expert's point of view.

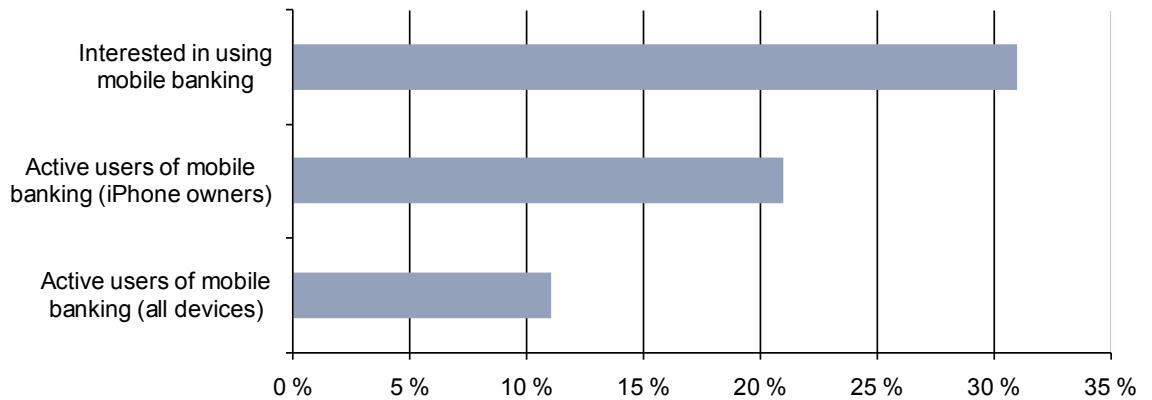
The results, from a bank's perspective, can be summarized as follows:

- Mobile banking is frequently an additional channel to the customer, which is or must be maintained for reasons of completeness.
- The user numbers are comparatively low. They represent less than 1% (based on the number of customers or number of users of mobile banking compared to online banking).
- New generations of devices lead to visible growth. Thus, 53% of access is from an iPhone.
- Use scenarios, which make the special features and strengths of the mobile terminal useful for both the bank and the customer, are currently being tested in selected cases. The first positive examples, especially regarding customer feedback, have been recorded.
- Sales and marketing experts, as well as innovation managers, consider the topic to be of extreme interest. However, there is still a lack of innovation scenarios that would turn mobile banking into a fast-selling item.

### 2.3.2 Results from Other Analyses

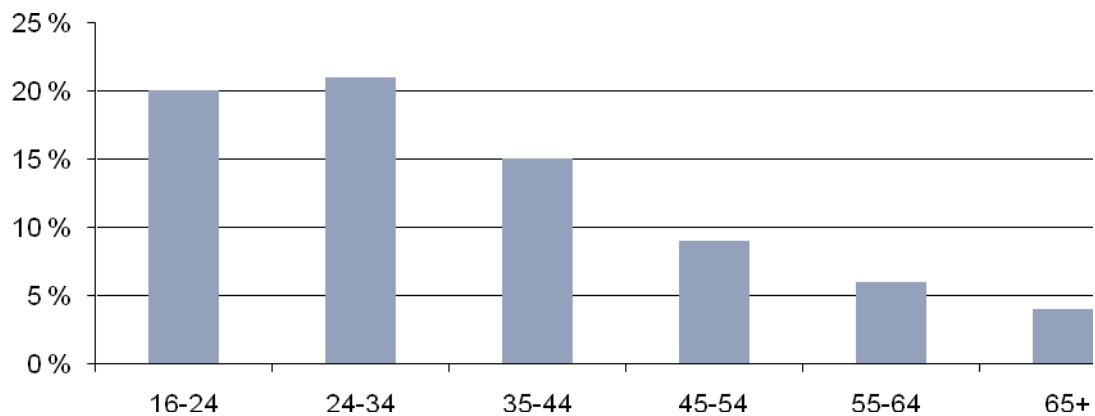
These assessments are confirmed by established market research institutes. Deutsche Bank Research published the results of a variety of tests in February 2010, in an article entitled "Mobile Banking is still not widespread but has become more interesting".

The results show that in 2009 only 11% of Germans with mobile internet access actually used it for mobile banking. However, 31% would consider using their cell phone in the future to access bank websites.



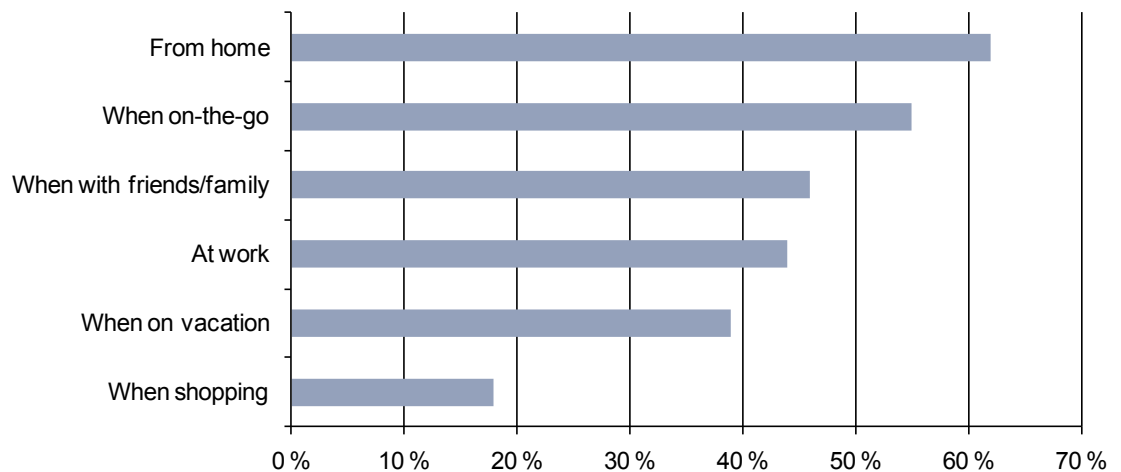
**Diagram 1:** Users of Mobile Banking (Source: Deutsche Bank Research, 2010)

Significant here is the age structure: 20% of people under 35, and over half of people under 44, currently use the internet via their cellular phones. This trend will continue with the “growth” of younger generations, who are much more open to new technologies.



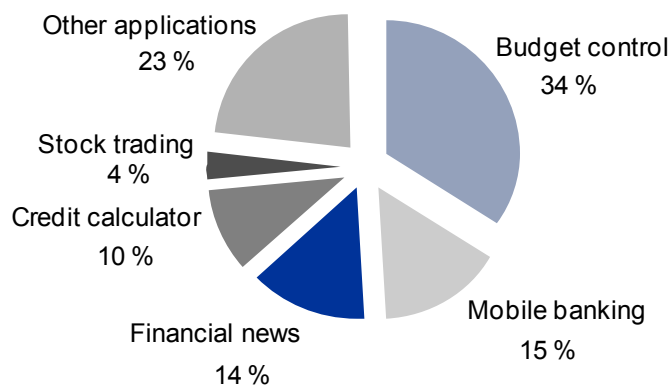
**Diagram 2:** Over 20% of people under 35 use the telephone for internet access (source: Forrester Research Inc., 2009)

It is generally assumed that people who use mobile internet are not at home or work when they access the internet from their telephone. However, surveys conducted of German users show that this is not the case. Over 60% of users use their cellular phone, even if they could use the computer. The reasons cited for this fact is that the service is immediately available without the long start-up times involved in PCs. Moreover, certain mobile applications provide a significant added value for the user.



**Diagram 3:** When Mobile Internet Is Used (Source: Deutsche Bank Research, 2010)

A detailed look at the available mobile applications helps explain what a user wants. This is why most of the top 100 US applications for the iPhone are from the financial environment.



**Diagram 4:** Top 100 Applications for the iPhone, US Market (Source: Deutsche Bank Research, 2010)

## 2.4 Special Technical Features

The special technical features of mobile terminals, such as the model, different technical equipment and specific operating system platforms, represent serious challengers for providers of mobile banking applications.

### 2.4.1 Model

Due to the small model size, the presentation and dialogue flow used in applications must be adjusted to cellular phones. The content must be reduced to most important aspects and input screens must be split into multiple partial screens. This is true not only for the actual content itself (e.g. transfer forms), but for the displayed product information or actions as well. Optimizing the layout increases the customer's acceptance of what is offered.

### 2.4.2 Equipment Features

The different terminals provide different equipment features. Whereas the camera function is now widespread, only a few devices have a GPS receiver for localization.

These types of innovative equipment features enable new application scenarios, which mean that a customer will have much greater loyalty to its bank. Concrete examples are provided in chapter 3.

### 2.4.3 IT

From an IT point of view, the differing operating systems and platforms used for the terminals pose a serious challenge. The iPhone is not the only device with its own development environment. Applications for those types of devices have to be able to run on the standards prescribed by the manufacturer. Java has to be used for some mobile terminals, while other providers develop alternatives, such as the Widgets used by Vodafone.

The lowest common denominator today is frequently the internet browser. However, the browser restricts the application to a minimum of functionalities and can hardly enable a bank to set itself apart from its competitors by means of individual designs or special offers and functionalities.

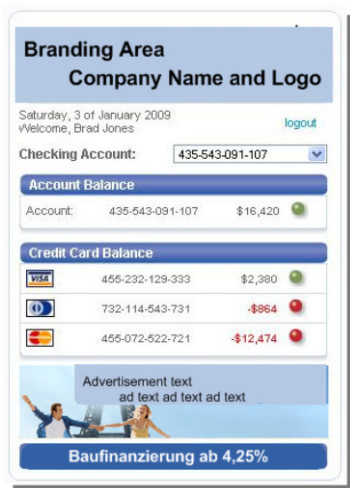
One alternative is being introduced to the market by specialised providers, which enables banks to decouple the layout and creation of applications from the special features of the terminal. In this case, a transformation layer transforms the platform-independent application into the respective platform-specific technologies – and yet retains all of the functionalities. One example is the Secure Banking Widget, which GFT has already successfully tested with individual customers. The Secure Banking Widget is based on a concept in which the different platforms are "neutralized" by a sophisticated abstraction layer.

### 3 Mobile Banking as a Differentiator for Retail Banks

Bank customers increasingly consider bank products to be interchangeable. The conditions offered are considered a differentiating factor. This is reflected not only in an external sense, but also in an increased readiness to change banks as soon as the competition offers more attractive conditions. Financial institutions are therefore exposed to the constant risk of losing their customers and are forced to invest in customer loyalty, as well as in the acquisition of new customers.

#### 3.1.1 Success through Mobile Added Value

Mobile banking allows direct banks and branch office banks to intensify the loyalty of their customers through new application scenarios, thereby making changing banks less attractive.



At the same time, mobile banking also provides a direct and modern channel for presenting and marketing new products.

In addition to advantageous conditions, a customer would have two reasons for remaining loyal:

- **Ease and comfort:** Comfort functions can make banking transactions and bank-related customer activities easier, thereby binding the customer to the company through direct access.
- **Emotional awareness of the company:** Enhancement of the individual customer focus through presence, presentation and a customer-specific address.

#### 3.2 Scenarios of Use

The following section will present a few use scenarios in which mobile terminals can be used above and beyond the conventional transaction process. This gives financial institutes a great opportunity for setting themselves apart from the competition.

##### 3.2.1 Branding by Presence – Always Keeping the Bank in Sight

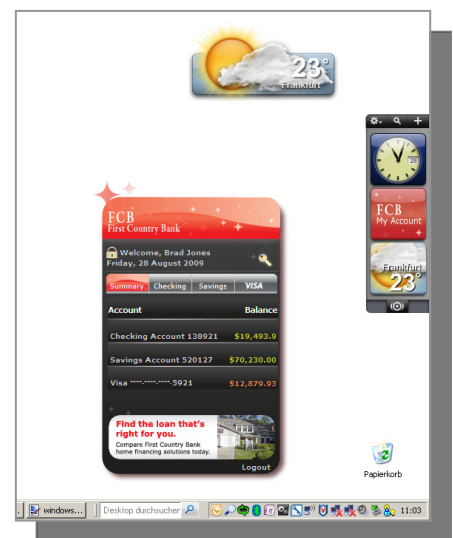
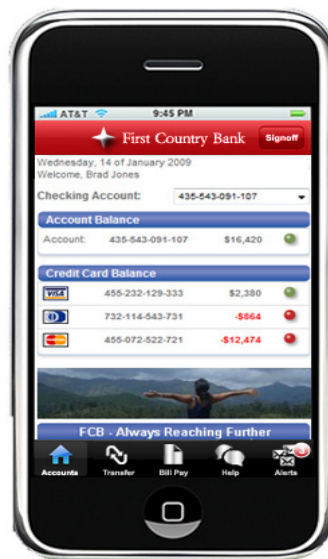
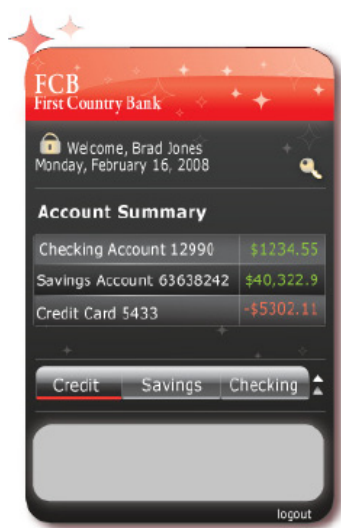
Company branding is a decisive factor, not only for acquiring new customers but also for retaining existing customers. In particular, a customer's frequent awareness of the financial institute in the mobile media is continuing to grow in importance.

In contrast to branch office banks, the presence of direct banks is a known challenge, and it is frequently promoted through conventional marketing campaigns. This gives mobile banking growing significance, since a high-performance channel can help intensify the perception of the respective brand name. The concept of widgets is used for this precise purpose and can be used to supplement conventional online banking.

For example, widgets are used to position messages, stock market data or weather information on PC screens. As such, they are well-established among many users and are considered an integral part of their user interfaces.

Widgets are also used in the field of mobile applications, for example with iPhones, BlackBerrys or Nokia Smartphones. They can also be found in PC applications and on personalized websites (desktop, MS Vista Gadgets, Apple Dashboard, My Yahoo, Facebook, MySpace, etc.).

Examples of widgets:



Widgets on personalized websites

The same widgets on the iPhone (App)

Windows widgets (so-called gadgets)

The advantage of the widgets is – apart from the technical restrictions of the terminal – the ability to create an identical presentation of the same information and functionalities on completely different terminals.

A company's corporate design can be displayed identically on all terminals. The integration into personalized websites and on the desktop of a home-based PC means that a customer continues to perceive the bank's presence, even when he/she is not making transfers or carrying out other bank transactions.

Widgets can appear permanently on the desktop, especially on a PC, which makes them extremely interesting from both a customer and provider point of view, in connection with the use cases for information and ad-hoc information presented below.

Initial experiences have shown that the so-called click rate is two to three times higher than common advertising via the internet, which is not free-of-charge, such as search engine campaigns. This can be further enhanced through the display of information, as is commonly used to indicate new e-mails.

All available terminals can be used to actively recommend new products to customers or to send them interesting messages.

The result is that the customer always has his/her bank in view – whether on the PC or on a cellular phone.

### 3.2.2 Photographic Transfer Formatting

Customers still receive transfer templates from various places, such as mail order business, insurance companies or agencies. The standard customer approach is to copy the data into the bank portal. The customer begins this by turning on the PC, logging on to his or her account, entering the data and frequently having to enter the lengthy order numbers. This makes individual transfers a very elaborate procedure.

As an alternative, the cameras available on most mobile devices can now be used: Customers can take a picture of the template and format the transfer using a simple text recognition program, and is then able to display them for review and release. This function greatly reduces the effort involved in making individual transfers.

### 3.2.3 Branch Office and Cash Machine Locators



Today's increased mobility means that customers often face the problem of finding a cash machine from their bank or one of its affiliates at their current location. Providing a branch office or cash machine locator on the cellular phone can make this search much easier.

Since more and more cellular phones are equipped with satellite localization for navigation systems, the branch office or cash machine locator can quickly lead the customer to his/her goal. Additional information, such as bank hours or the exact location ("Is the target cash machine in a shopping centre or in a pedestrian zone?") can be displayed along with the conventional functions of the navigation device. Current product information can also be displayed.

### 3.2.4 Customer Loyalty through "Principle Bank Effect"

Neither branch office nor direct banks can exclude the possibility that their customers also have business relations with other banks. In this case, a provider must make changing to a familiar competitor even less attractive.

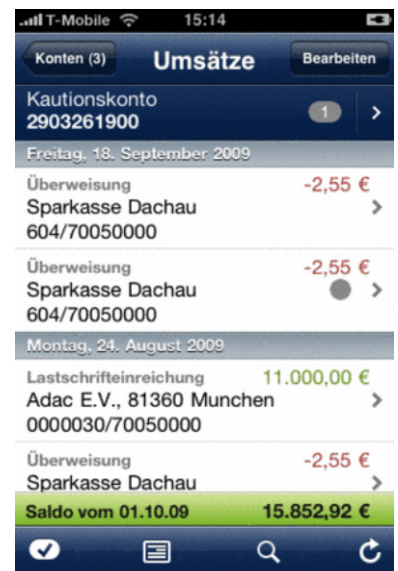
One possibility for this is to integrate accounts held with other institutes into their own mobile banking solution. This gives the customer a complete overview of his/her bank connections and accounts through a single portal. Moreover, simple mechanisms can be used to enable transactions between the different banks, such as transfers.



The main advantage to the customer is the overview of accounts, banks and products, as well as the easy transaction process between the different accounts.

This obvious advantage will create greater customer loyalty to the bank providing the service. The first financial institutes to realize this opportunity will especially profit from the service.

Providing this type of portal will certainly be a political decision for the company. One argument to be expected from the financial institute is that the described functionalities would also enable the customer to transfer his/her investments to other institutes. However, this will not stop certain banks from recommending commercial software solutions for mobile banking to their customers. One example is the multi-bank-capable mobile banking offered by StarFinanz, a member of the Sparkasse (savings bank) group.



As an alternative, software providers such as Outbank offer a purchasable software solution that is also multi-bank-capable. The disadvantage, however, is the lack of institute-specific branding, since all banks are presented to the customer equally. There is also no opportunity for a bank to strategically place its own products.

The technical requirements for the implementation of these types of solutions are already available in Germany.

### 3.2.5 Status and Security-Oriented Functions

These functions focus on the bank customer's need for in-depth information and the avoidance of fraud.

For example, customers can activate a balance limit using a push mechanism or can be informed by instant message when maximum/minimum limits are exceeded. This allows customers to react to the situation, for example by the transfer funds to or from an instant access account regardless of the time or their location.

Moreover, transaction limits can be set. Today's banking already uses transfer and daily limits, where further transactions are not allowed on any given day when a limit has been exceeded. Moreover, customers can be notified when a transfer will be made that exceeds the predefined limit. An individual intervention mechanism then allows unintentional or undesired transactions to be stopped.

Another option would be a connection to the bank's existing fraud detection system. These would create alerts, if uncommon account movements were observed for the customer. This could include transactions made in brief amounts of time on different continents, or frequent debits for customers who generally do not carry out transactions or very few transactions. The customer is then asked to respond to the alert, and a call-back number to the bank's service centre is automatically sent to his/her mobile terminal. Alternatively, the bank could also offer direct access to view and confirm

transactions via a browser. GFT has already established corresponding information services in this context in numerous banks.

### 3.2.6 Ad-Hoc Recommendations

Ad-hoc recommendations allow a bank to recommend suitable products and purchases to its customers. Such recommendations could include taking money currently in a checking account and "parking" it in an instant access account or a fixed-deposit account. The recommendations could also be combined with a call-back function for the cellular phone, which would connect the customer directly to the bank's contact centre. A corresponding link would simultaneously be offered in the personalized online banking application, which would connect the user to information on the product in question or to a specific transaction.

As a further alternative, customers who have already purchased a product could place another (purchase) order and authorize it directly. Moreover, special forms of brokerage would also be possible, such as purchase recommendations when the customer goes below certain limits.

The customer perceives these offers as recommendations and customer support and is presented with tailored suggestions, without having to remain in constant contact with his/her advisor. Banks, on the other hand, profit from a result-oriented offer presented in real-time. This enables a much more direct and targeted customer address than traditional communication channels, such as PO boxes, e-mails or conventional mail.

### 3.2.7 Mobile Payment

Although mobile payment is already an established method of payment in many countries, its use in Europe has been limited to a few pilot projects. Examples of such projects include the transport association in the region of Rhine-Main, where tickets for public transportation could be purchased or various certified systems for paying parking fees, or the joint touch & travel project by the Deutsche Bank and Vodafone. At the same time, some commercial companies are working on practical ways to replace cash, such as Metro with its "real-Future Store".

Mobile payment has already been quite well established in other countries. In London for example, Visa, the Barclay-card, Nokia, O2 and the public local transportation system have joined forces to realize the concept of "Wallet Phones" based on the Japanese model. In this case, the cellular telephone serves as a combination of electronic wallet, credit card and public transportation ticket.

This focus of the project lies in the contact-free payment approach, based on the Near Field Communication Protocol (NFC). The cellular phone serves as a wallet and communicates with a payment automat. The use of another card is no longer necessary. Visa and MasterCard also want to take advantage of this technology, Visa with "payWave" and MasterCard with "PayPass"; however, their systems are based on the card instead of the cellular phone. According to MasterCard, 146,000 locations already accept the procedure, which was introduced in 2003.

In contrast to the similar application method of cash cards, the cellular phone has a strong potential of becoming an established payment system. This is closely connected to mobile banking functionalities, which would enable certain functions such as putting money in an electronic wallet without having to find a cash machine. Moreover, cellular phones have high security standards in the event of a lost device.

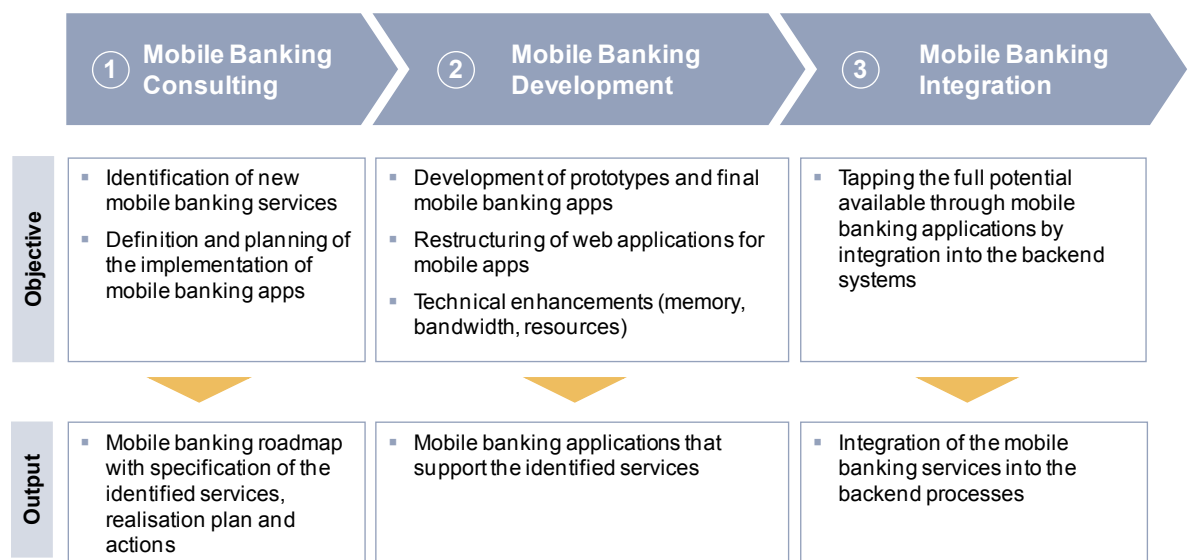
## 4 Service Scope

The challenges faced by banks in establishing mobile banking as a new channel to customers is multifaceted. On the one hand, suitable strategies for introducing mobile banking must be developed on the business level, from selecting suitable use scenarios to the layout and structure of those scenarios. On the other hand, business processes have to be adjusted to new media and integrated into the bank's technological environment. GFT can provide support in both areas, through its industry-specific experience and qualified experts.

In addition to long-term experience in the structuring, development and realization of online banking solutions, GFT has already implemented the first mobile banking applications. GFT also provides support for these types of applications, in ongoing maintenance for its customers and adjusts them to new business, as well as technical and regulatory requirements.

GFT has already developed and realized new, business-oriented use scenarios that are based on the latest versions of mobile terminals. These include, for example, the branch office locator presented above, detailed information services and a stock option plan for a select group of a bank's customers.

From these experiences, GFT has created a three-level approach for the development of mobile applications that are suitable for a wide range of platforms. Thanks to GFT's excellent technological competence, the company is able to provide mobile banking services, and it can quickly optimize bank processes for and make them available for use with mobile terminals.



In addition, we perform user analyses that include our observations of the competition and concrete recommendations on how to proceed. During this process, GFT's mobile banking experts place special value on the following questions: What does the customer expect at this point of the process? Are the customer's expectations being met? What specifically could be improved?