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# How to Succeed with future Mobile Solutions

**Currently telecoms and many other companies are faced with an enormous problem: what are profit-promising new mobile solutions to customers and how can these business models be mapped into the "new economy" using bits and bytes as the basis of business? Are the billions of dollars being spent on building up new infrastructures like UMTS justified by return on investment?**

**G**enerating profit and a positive return on investment in a reasonable amount of time are the only valid justifications for these investments. However, complex theoretical business models can be established to cover real

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life situations. Nevertheless for realisation all limiting factors must be known. Since the technical realisation of this transformation can be rather complex, this might be one. Sophisticated billing systems are a definite requirement for this mapping.

Long-lasting experience has been gained in the "old economy" on how to generate profit and to set up business successfully. The first internet hype of the new economy has just elapsed and only a few ideas on how to turn Internet and future mobile business into a profitable business are surviving. Recently lots of market research has been done on how profitable future mobile solutions may look and how profitable they may turn out to be. Unfortunately, market research studies have the drawback that customers are asked about potential solutions they do not know and they do not have to pay for yet. This gives a significant bias for interpreting the resulting figures.

Thus turning a broad range of potential future mobile solutions into profitable business still remain open. In this paper we want to derive a concise overview of

the paradigms of future mobile solution business models and derive the main requirements for billing systems which are able to turn these solutions into profitable business.

## Characteristics of successful Mobile Solutions

Lots of market research has been done trying to identify "killer applications" for future mobile solutions. Many ideas have been brought up on what could be done. Nevertheless, the "killer application" could not be identified so far and the fraction of experts considering "voice" as being the future "killer application" grows. The business case of turning voice business into profit is well known. But voice does not require new technologies. So why make tremendous investments in new mobile network infrastructure?

Network operators and service providers are trying to increase their revenue and profit by bringing new products and services to the market. These services do require investment in new technologies, but do they satisfy the expectations on the return of investments? New successful mobile solutions must fulfil several postulates as a prerequisite for becoming profitable:

- Users must be easily convinced that the service brings an added value to their life. This turns out to be a quite complex task. Creating new services does not only simply imply that customers can do new fancy things. Also their culture and grown status symbols must be kept in mind.

- Services must be easy to use. Any successful services operate on the basis of turning on the device the first time without reading the manual and still being able to use the service. Another service needing more sophisticated users is for experts and must guarantee exclusiveness to the user group.
- Either the service provides users with the feeling of belonging to an exclusive user group or the mass market must be gained as customers. High volume expenditures for mobile solutions can only be expected when the users get the feeling of belonging to a distinguished group of people being easily recognised by others. Otherwise the service must be able to gain the mass market.
- Users must feel comfortable. Security aspects of mobile solutions have to be kept and are not a subject of discussion.
- Users must be provided with an easy way of getting help, in case questions or problems occur, especially with increasing exclusivity of the product. Clerks serving customers in "old economy stores" have been found to be a successful business model for keeping customers and increasing their loyalty.
- Customers return to shops where they are served with care, are welcomed and get individual treatment and prices.
- If users can tailor services individually according to their needs they feel best served. They do not have to pay for parts of the service they never use. Services are put together with respect to "you get what you pay for".
- It is no longer sufficient being the first on the market in your own region. You must be first on the market worldwide, the competition is just "one click away" – no matter where the competitor is located.

- Services should be able to run on different infrastructures, of which a mobile is just one.
- Users are sensitive with respect to their budget spent on telecommunications and related services. Surveys reveal that users are not willing to spend much more than they are currently spending purely on voice services. Thus the market for future mobile solutions will be competitive and a replacement market (fig. 1).

**What are the characteristics of promising future mobile business scenarios?**

We just looked at characteristics of next generation mobile solutions. But how might business evolve? Currently most business models for content commerce are not profitable for companies, and mobile IP scenarios are not yet established. The hype of Internet startups is gone. For mobile solutions, as closely related, the situation is comparable. The question is, how can a profitable business model be setup? Clearly the customer is a fixed point and centre of any successful business model. No matter whether we are looking at the "old economy" or evolving mobile solutions. At least four factors have an impact on the customer: effects from the market, business, internal processes and the underlying technology. It is clear that these factors interact with each other.

**Market**

The market has to be looked at in general as being a global market place. This is due to the fact that Internet technology and online shops enable any customer to access any shop worldwide with the same minimum effort, i.e. "one click". Customers can go "offer hopping" with single clicks. Thus, if your product or service does not have "global" unique selling points, your competitors can be located anywhere and are not restricted to your region. But this business threat implicates a business opportunity as well. Your customers are global! Few exceptions do indeed exist. As an example of mobile solutions just think of location based services. These services may have a strong regional relationship. Take a service, such as "Home deliveries from the supermarket". This mainly only makes sense, if you live in the same region. Now think of tourist information: In this case, what is preventing an American company from being the supplier of location-based services relating to European cities? And surely tourists are customers too, coming from all over the world. As a service supplier you have to clarify the nature of your product and focus on target markets, once you have figured out the specifics. Campaigns have to address the entire market, so be prepared to set them up globally.

**Business Model**

If you have characterised your market focus, you should consider the business model. What are essential criteria for being successful in the future? Of certain relevance are:

- Attractiveness: A supplier should adopt his customers' perspective and figure out how to make his offer more comprehensive. One possibility is to take on business partners. Greater attractiveness improves customer loyalty. Another way is to provide customers with the possibility of subscribing to product bundles, even across different business partners.
- Partnering: The focus on your core competencies allows suppliers to complete their offer with respect to customer needs.
- Pricing: A tremendous change in pricing policy is taking place. The basic question asked is with regard to the individual benefit the mobile service brings the customer. The customer has to be taken care of with individual discounts and bonus systems. His awareness of "he gets what he pays for" has to be sharpened.
- Loyalty: Bonus systems are only the first step for sophisticated loyalty schemes for mobile services. A next step might go towards incentive systems.
- Speed: Fast time to market will be one of the most essential topics. Being the first on the market allows branding.

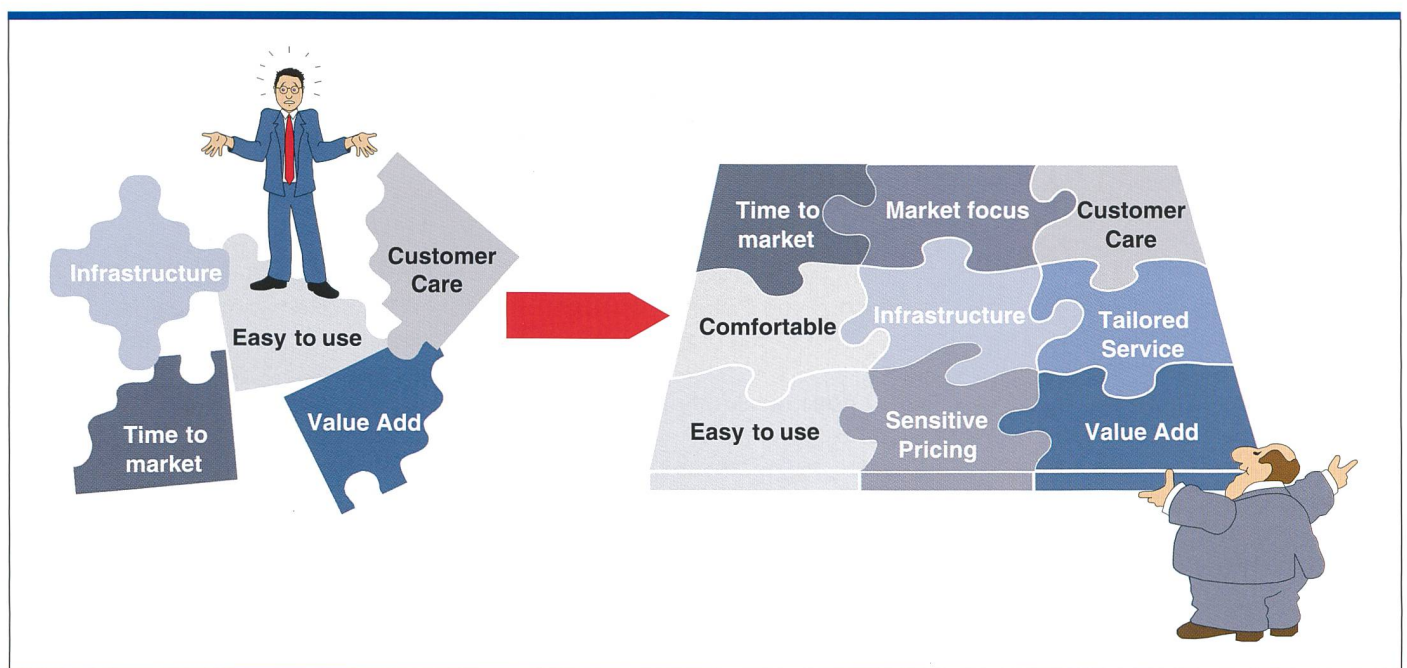


Fig. 1. The puzzle of success

Consequently it is better to act and not react on the market. Most promising business models set out to determine the pace of the competition. However, the supplier has to be flexible to take the necessary action, if changes need to be made.

- Customer mining: A greater knowledge of the customer forms a basis for a successful business model. The better you know the customer's history, the better the customer can be catered for. Customers should be treated in a personal way that makes them feel comfortable.

ther be barred from business because of incompatible technologies nor should they become impatient due to integration problems between the systems. Essential systems in business support solutions are billing, CRM, payment, accounts receivable and data warehouses. Any of these systems should not pose any restrictions on the choices a customer could have. Nevertheless billing will become the most efficient tool for steering future business. Billing systems are at the centre of the network between customers, business partners and business models.

life situations. Thus billing systems will play a major role as a revenue generator and business steering remedy in business processes, for example by restricting the business itself to the core processes and using partnerships. The same applies to business support systems. Systems should be used only in their core functionality. "Outsourcing" can be done by interfacing to other systems via standardised interfaces. Classical telecommunication billing systems are characterised as describing stable situations, and changes within the business setup can be described by para-

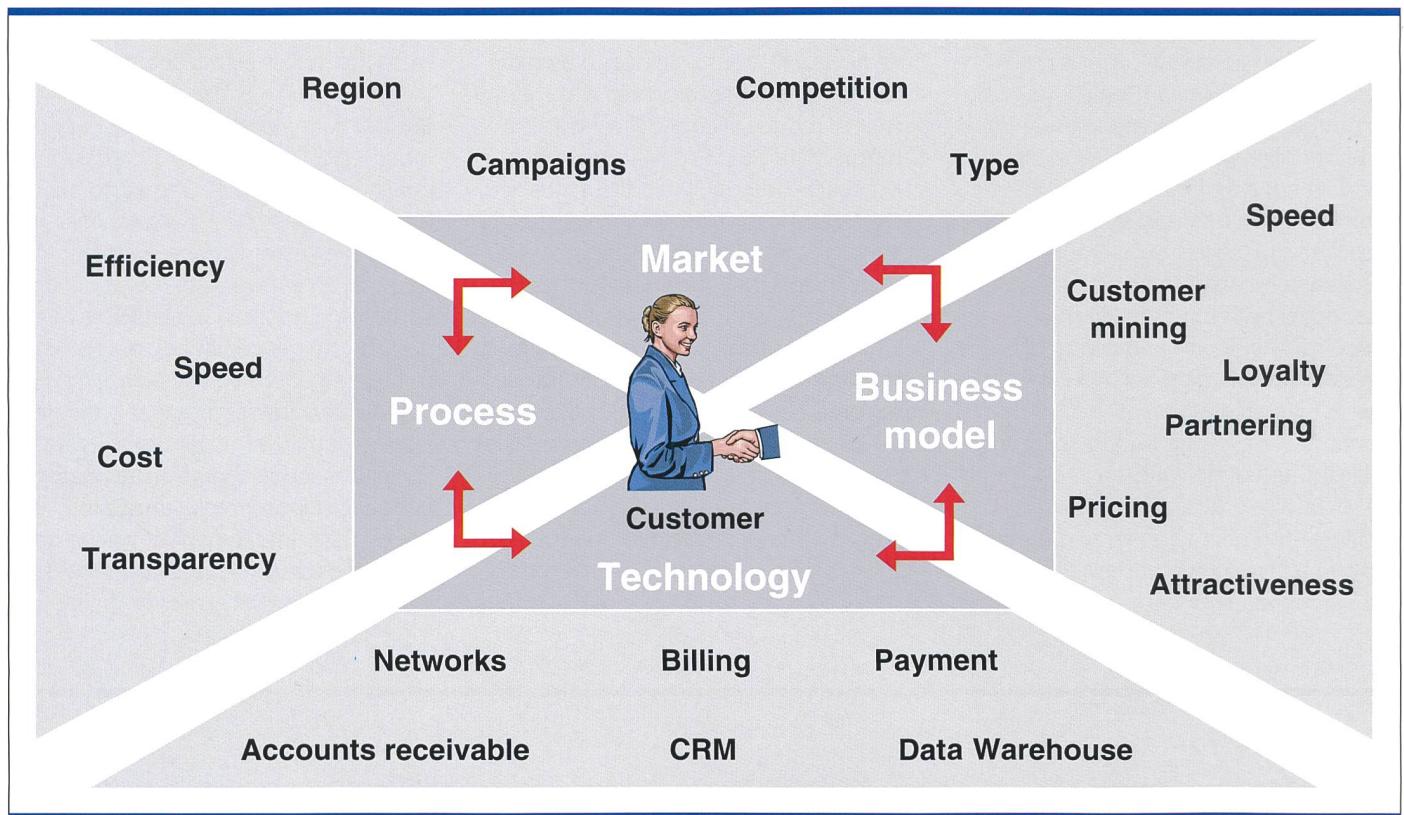


Fig. 2. The customer is the centre of business

**Process**

Efficiency and process optimisation are a must for future mobile business scenarios. Cutting costs goes hand in hand with this process. Suppliers thus should focus on their core competencies, not only regarding their portfolio but also with respect to the workflow. A lean and efficient organisation allows suppliers to set up new promising services quickly.

**Technology**

Technology provides a solid foundation for efficient processes and for realising business models. Customers should nei-

In summary therefore, your business, services, costs and customers must be transparent to you (fig. 2.).

**What does this imply for Billing Systems?**

The described essentials of future business scenarios and characteristics of next generation mobile solutions will have a substantial impact on all business support systems. Especially billing systems will be heavily affected. Future billing systems turn out to be quite flexible and do not restrict market suppliers in transforming their business models into real-

meterised tables. Thus object models, workflows and business logic are hard coded and adjustments can only be made by means of parameter tables. The transaction pattern is more or less isolated and batch-oriented. This is no longer sufficient for supporting future successful business models. Future billing systems have to provide network operators and service providers with another type of system. Basic requirements are outstanding flexibility, speed for bringing services to the market, service orientation to the customer, and being part of a complete business

support solution. Therefore mobile commerce supporting billing systems must be capable of importing the object model and business logic of business partners during runtime, and transactions on billing systems are part of real-time scenarios. In the following we describe these issues in more detail.

### Flexibility

Flexibility has at least three most relevant aspects, namely: product definition, pricing and business partnering.

#### Flexibility in Product Definition

Billing systems must be capable of dealing with products with unprecedented flexibility. A large number of separate businesses with different characteristics in terms of product complexity, pricing strategies and links between products and pricing functions are potentially to be hosted. Bundling of arbitrary products even across business partners has to be possible.

#### Flexibility in Pricing

Flexibility in pricing requires that each customer is treated individually. Thus the answer to a price request is not just to look it up in a general table. Sophisticated algorithms have to be used before a price is handed to the customer. Input parameters are at least the basic "catalogue" price, the customer's history, discount models, bonus systems, sponsoring effects and reductions due to advertisement.

#### Flexibility in Business Partner Handling

Keeping business attractive implies that completion of the own offer by those from partners can be easily set up and changed. The time for actions due to changing market requirements shortens significantly. Billing systems should allow changing the business logic during runtime. Instead of adapting the existing business model of partners to fit into the billing system link their own business model without making any changes to your system.

### Speed

Like flexibility, speed is diverse. First there is the speed of bringing new products, services, tariffs or campaigns to the market (fast time to the market). Predictions and simulations play a less relevant role. More dominant will be bringing products

to the market and to monitor its performance. The decision of the customer on the acceptance of services is the important one. The billing system only has to provide sufficient flexibility for supporting its users. Thus being the driver of the market requires an easy-to-handle and efficiently working billing system. Secondly, there is the requirement on performance on billing systems and the demand for real-time capability functions which are especially profound.

- Online pricing which includes strategies of elaborating discounts based on order history. Prices have to be communicated to the customers before deals are accepted.
- Online billing taking into account all applicable taxes and bonuses, because shop-and-go mobile commerce scenarios will require immediate and definite bills.
- Online payment interoperability to minimise fraud.

To satisfy the requirements of mobile solutions, pricing and billing must be possible in real-time and on demand.

### Service Orientation

Future billing systems have to be customer oriented. They are no longer restricted as being part of the internal workflow. The service or customer orientation requires that each customer gets his bill in his desired format and structure. Interfaces to CRM-systems, call centres and complaint management are a must. Besides having a service orientation towards customers, billing systems and their administrators must be service oriented as well. There is the need to operate a cost efficient billing system with a minimum of resources.

### Business Support Systems

The infrastructure of business support systems consists of systems focussing on their specialised complex tasks. For interaction the interfaces have to fulfil standards. Ideally, the business support systems should cover the whole range of the workflow and the information flow as well. Furthermore, the billing system must be able to cope with various input records coming from different technologies. This can also be a mixture of usage data and on-time events. 1

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*Vodafone TeleCommerce is an exhibitor at Billing Systems 2002.*

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## Zusammenfassung

### Billing-Systeme: Wie man neuen Mobilfunklösungen zum Erfolg verhilft

Wir können heute beobachten, wie sehr sich die Telekomgesellschaften und andere Firmen anstrengen, aus Bits und Bytes, den begehrten Nuggets des Internets, Kapital zu schlagen und dem Kunden ausgeklügelte, aber Gewinn bringende neue Mobillösungen schmackhaft zu machen. Und weil sie diesen Schatz zu heben hoffen, lassen sie sich den Aufbau von Infrastrukturen wie UMTS viele Milliarden Dollar kosten. Doch alle diese Anstrengungen helfen nichts, wenn es nicht gelingt, mit den Bits und Bytes eine ausreichende Rendite zu erwirtschaften. Komplexe theoretische Geschäftsmodelle müssen unter realen Bedingungen entwickelt werden. Ihre technische Umsetzung ist recht komplex und das kann den Erfolg gefährden. Darum braucht es, wenn diese Umsetzung gelingen soll, ausgeklügelte Billing-Systeme.