

What customers really want

A customer-centric strategy for telecom operators

What customers really want

A customer-centric strategy for telecom operators

Table of contents

Management summary	3
1. Why do telecom operators have difficulties understanding their customers?	4
1.1 Customer-related data in the telecom industry is becoming ever more complex	4
1.1.1 Data fragmentation causes complexity	4
1.1.2 Isolated data gathering makes consolidation difficult	6
1.2 Incoherent internal structures make it difficult to transform data into knowledge	7
1.3 Standards are defined by others. Apple, Google and eBay leverage their customer know-how much better	10
1.3.1 Apple, expert in customer understanding	11
1.3.2 Google, expert in data mining	12
1.3.3 eBay, expert in holistic customer understanding	12
2. The customer-centric philosophy: From vision to best practice	14
2.1 Stage one: Centralized operations	18
2.2 Stage two: Linear operations	19
2.3 Stage three: Interactive operations	20
2.4 Stage four: Holistic operations	22
2.5 How IT supports the transformation	24
3. Outlook	27
The authors	28

Management summary

Idea: Customer centricity is more than a buzzword: it is a philosophy centered around the customer's individual needs. It must be incorporated in the corporate strategy and should permeate the entire organization. Developing this in-depth customer understanding is crucial in keeping a competitive edge in the telecom industry.

Status quo: Telecom operators are facing huge challenges. In saturated and highly competitive markets, their services are quickly becoming a commodity. At the same time, margins are shrinking. Many operators are launching "customer-first" or "customer-centric" initiatives. But often they are not able to deliver the goods. Players from adjacent online industries such as Apple, Google or eBay are leveraging their customer knowledge much better and are defining the benchmark for customer understanding and experience.

Telecom operators have very complex and non-harmonized data structures that result from legacy systems and incoherent processes. Drawing valuable knowledge from such data today still involves a lot of manual work. Against this backdrop, customer centricity based on true customer knowledge remains a very elusive concept.

Approach: This study presents a roadmap on how telecom operators can become customer-centric organizations. Senior management has to initiate a change in philosophy and develop the business strategy around customer needs. The basic requirement for success is reliable data management. In this study, we set out to illustrate how the data strategy can help support the customer strategy at each step of the way. Our framework helps set up the business case, redesign the relevant processes and adapt the IT landscape to the new requirements.

This study is based on interviews with European telecom managers. It also draws on extensive Roland Berger project experience in strategic marketing, sales, service, business intelligence and CRM. We illustrate our findings with project examples and best practices from inside and outside of the telecom industry. We intentionally exaggerate at times, knowing that the picture is not only black and white but has a lot of gray. We are also aware that operators are improving the situation and taking on the challenge. The challenge is huge and the way is long – we therefore want to encourage them to go the distance. We trust that this study can contribute some valuable insights for the journey.

1. Why do telecom operators have difficulties understanding their customers?

Telecom operators are facing three main data challenges:

1. They generate huge volumes of very valuable data from telephony and data services in their fixed and mobile day-to-day business.
2. Their internal setup makes it difficult to transform all this data into knowledge.
3. Standards for customer understanding are defined in adjacent industries. Best-in-class players such as Google, Apple and eBay are leveraging their customer know-how much better.

1.1 Customer-related data in the telecom industry is becoming ever more complex

"There were 5 exabytes of information created between the dawn of civilization through 2003, but that much information is now created every 2 days, and the pace is increasing ..."

Eric Schmidt, Google CEO, at Technomy Conference 2010

In the global marketplace, businesses, suppliers and customers are creating and using vast amounts of information. Technology research firm Gartner predicts that enterprise data in all forms will grow 650% over the next five years. According to IDC, the world's data output doubles every 18 months. This flood of data, often referred to as "information overload", "data deluge" or "big data", clearly creates a challenge for business leaders.¹⁾ Managers are struggling to exploit the information that is constantly being generated by their current and prospective customers.

1.1.1 Data fragmentation causes complexity

Sources and types of data are classified into different categories. While classifying helps to get a handle on the general data management problem, classification systems themselves are becoming more complex and the number of data classes is constantly increasing. Integrating these different data classes is still a huge challenge and help from an expert can be essential.

1) Avanade: Global Survey: The Business Impact of Big Data, November 2010.

Here are some examples of categories:

Research data: Based on surveys and field research, operators have massive amounts of customer data, e.g. sociodemographic and regional characteristics. This data is mainly used for segmentation purposes in strategic marketing. It is not usually available on an individual customer level. Operators rarely have data on customer values and needs. If they do have such data, it is usually neither quantitative nor comparable across different business units. The reason is that the business units do their own brand, segment and customer research. So the problem is not only defining who does what, and determining where the data is stored, but also guaranteeing comparability.

Operational customer data: Telecom operators have order and contract data, channel data, billing data and information on customer devices, tariffs and option preferences. These are combined with basic data on names, addresses, gender and age. Ideally, data about the sales channel is integrated with a usage history and an average revenue per user (ARPU) classification. For billing purposes, call data records (CDR) are mapped to tariffs. Typical information concerns call times and call records (on-net, off-net), the number of text and multimedia messages, e-mails and the volume of data traffic.

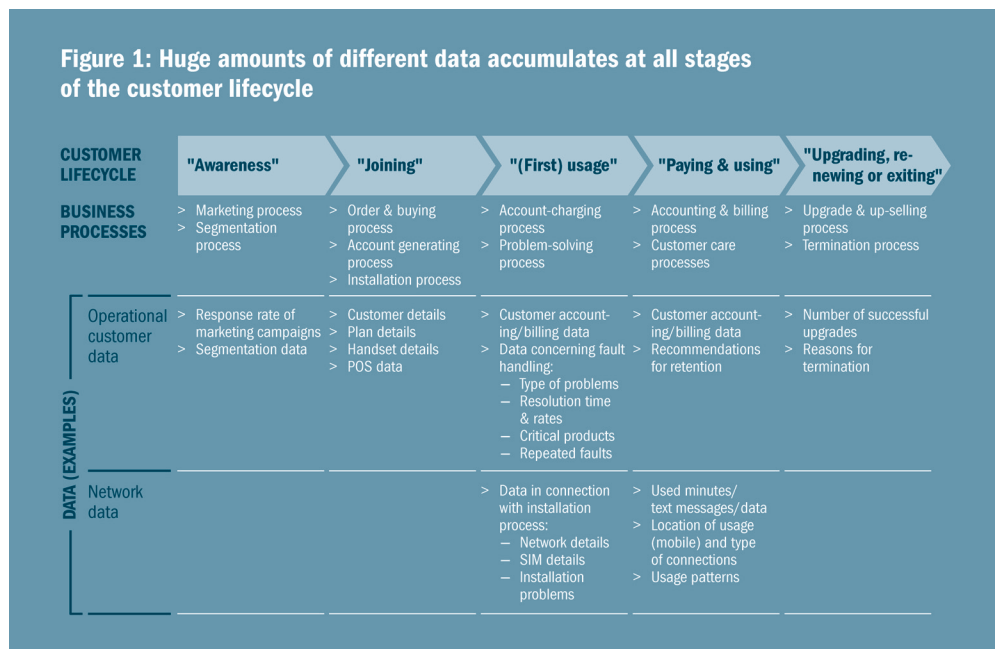
Network data: Besides basic volume data (voice, data), mobile networks generate location-specific data and user handset data. In fixed line networks, volumes and usage intensity are key parameters. All technical faults are reported as network data.

Contextual data: A new class of data is generated in social networks by customers themselves. On Facebook, Twitter and in other communities, users can provide information to and about the operators. This means telecom operators have to either mimic or cooperate with social communities to access this contextual data. Starting their own communities is not a viable option for telecoms, however.

Operational customer data is usually used for campaigns, loyalty programs and analysis, and more and more network data is used for the same purpose. In particular, failed call attempts and configuration problems are used to evaluate customer satisfaction with the network quality, churn models, etc.

1.1.2 Isolated data gathering makes consolidation difficult

Data streams come from many different sources, and, to make matters worse, they are gathered in isolated stages along the whole customer lifecycle (see Figure 1).



Some typical touch points are:

- > Starting with the initial contact, marketing generates segmentation data (awareness stage).
- > When buying a service (joining stage), installation process data and customer details are generated by other parts of the organization.
- > Traffic data is tracked for all installed customers (usage stage).
- > Billing data is produced for all active customers (paying & using stage).
- > For at-risk customers, additional evaluations are used to prevent the customer from exiting.
- > What's more, customer data is used for revenue management (revenue analysis, reminders) and aggregated in financial management.

In theory, the customer lifecycle should provide many insights into individual customer behavior. In practice, operators are just beginning to exploit this potential. Furthermore, the level of sophistication varies significantly between operators. We will look at the reasons in the next section.

1.2 Incoherent internal structures make it difficult to transform data into knowledge

"The teams merged but the systems didn't, so from the outside it looks like a merged company, but from the inside we see a mobile customer, a TV customer, an Internet customer, but sometimes they can all be the same person."

Martin Péronnet, Monaco Telecom CEO, from www.totaltele.com

Our project experience shows that different factors make it difficult for operators to transform customer data into customer knowledge and to act upon it accordingly. These internal factors are inadequate processes, incoherent organizational setup and disparate technical systems.

Some examples are listed below:

- > **Silo data** in each division: e.g. marketing, sales and network collecting their own data with a tendency to build workarounds to overcome limits
- > Different **storage locations** (data mart concept): multiple data centers with no suitable data transfers or interfaces
- > Different level of **granularity** in different domains: e.g. raw CDR data in the network, billed CDRs in billing and ARPU data in the marketing domain
- > **Obsolete data**: often several weeks elapse before customer data is available
- > Insufficient **standardization** of reports and KPIs: only top-level reports are standardized but inconsistent individual approaches are used for in-depth customer base analysis
- > Unclear **management requirements**: The complexity is driven by various types of ad hoc analyses. Processes and data structures are not adapted to these requests
- > **Contextual** social network data is rarely leveraged
- > **Inadequate technology**: e.g. for analytical purposes or historicized data

Most of the operators constantly adapt their system architecture. When we look at different companies, we find typical data challenges among the different provider groups of incumbent operators, mobile network operators and integrated providers:

Incumbent operators, for instance, have the longest history and often suffer from legacy structures. Preparing data so that they are fully customer and service oriented is next to impossible in most cases. For example, physical network line management is often not visible from the POS, which means product availability of broadband offers, etc. cannot be verified in real time.

Mobile network operators face similar problems with their data management systems, although they have a shorter company history. The majority of operators were established in the 90s. Although they started to ramp up completely new greenfield infrastructures, their data reality today is almost as complex as that of fixed line operators. This is due to ever more complex service and tariffs as well as technical changes. Mobile operators have also expanded into the fixed line business, further complicating the situation.

Converged providers, on the other hand, still have completely separate administrative channels for fixed network and mobile network customer data. The key issue here is combining the individual user view of mobile operations with the access view of fixed line operations. Integrated operators are focusing on IT integration rather than changing their customer philosophy, and then adapting their processes and modifying their IT accordingly.

In addition, all large operator groups in Europe have grown mostly through extensive M&A activities. The problem here is that they do not have an end-to-end view of their customers, let alone the systems that could serve as a platform for consistency across their subsidiaries. Knowledge sharing is, therefore, limited and customer segmentation approaches are different and cannot be applied across the group. Insightful analyses for one operator cannot easily be transferred to other operators in the same group. All major operator groups either have not standardized their CRM/data warehouse systems within their subsidiaries, or cross-national logical and technical integration is still in the fledgling stages. For governance reasons, standardization is especially difficult for minority stake subsidiaries – looking into and combining systems across borders is less of a technical and more of a governance issue. Subsidiaries do not want headquarters to look directly into their operating systems, which would mean much tighter and more direct control.

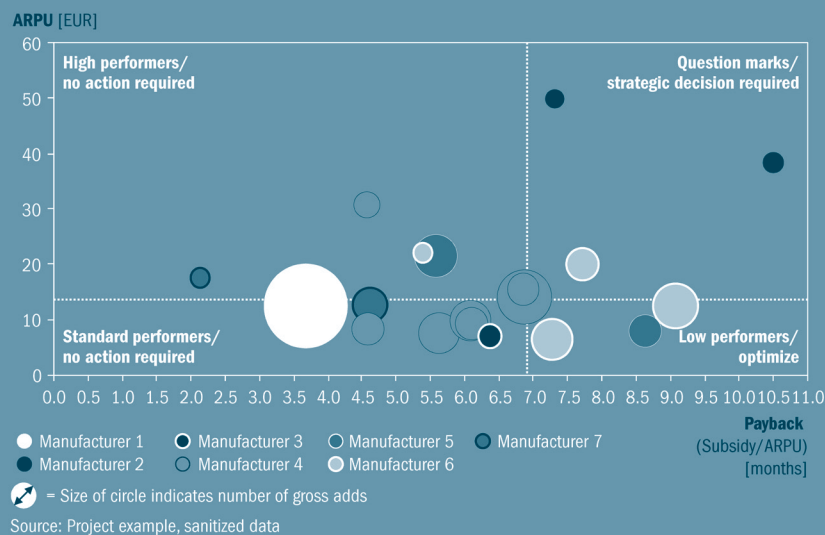
The following two project examples illustrate the lack of insight and the consequences for the operator. We have chosen one strategic marketing project and one operational sales optimization project to show that all areas benefit from analytical data evaluation. Collating and analyzing this data was anything but easy and took weeks of concentrated effort. While it should be a standard exercise for European operators, it had never been done before at the specific operator. The result was an eye-opener for management and led to significant savings while at the same time improving efficiency and effectiveness.

Project example 1 – Optimizing a mobile operator's handset subsidy policy

Challenge: Subsidizing mobile phones is common practice in almost all European markets, both for customer acquisition and customer retention. The operator in this case aimed to reduce and focus its handset subsidies. The task, therefore, was to come up with a very detailed ROI perspective on subsidies paid.

Solution: Refocusing spending helped to save at least EUR 10 million in subscriber acquisition and retention costs. Detailed ARPU data for each and every handset offered and subsidized by the operator was combined and matched with subsidy data from strategic marketing. We then classified subsidized handsets based on ARPU and payback time to find out where action had to be taken most urgently (see Figure 2). This analysis of handset profitability not only reduced overall spending on subsidies but helped shape and optimize the future handset portfolio.

Figure 2: Transparency on handset profitability can significantly reduce subscriber acquisition/retention costs



Project example 2 – Focusing regional sales efforts

Challenge: A telecom operator's sales team wanted to focus its regional efforts. As the operator had not analyzed its regional market potential in depth, it randomly scattered its marketing spend across all sales regions.

Solution: We helped the client develop a regional approach to tap the full potential of its points of sale (POS). We matched zip-code level data on POS performance with information on local mobile data usage and penetration. We then classified zip codes into different categories (see Figure 3). Obviously, POS sales in a low-penetration area can be more easily pushed than in a high-penetration area. This approach enabled the client to forecast the effectiveness of local sales pushes and adjust marketing spend accordingly.

Figure 3: Combining mobile data penetration with sales performance helped to set up more effective sales initiatives



1.3 Standards are defined by others. Apple, Google and eBay leverage their customer know-how much better

"When we were an agrarian nation, all cars were trucks, because that's what you needed on the farm. But as vehicles started to be used in urban centers, cars got more popular. Innovations like automatic transmission and power steering and things that you didn't care about in a truck as much started to become paramount in cars."

Steve Jobs, Apple Inc. Chief Executive Officer, from The Wall Street Journal

Most, if not all, major changes in the telecom industry in recent years were triggered by game changers from outside the telecom industry. Players such as Apple, Google and eBay from adjacent online industries define a new game. Their outstanding success is based on revolutionary approaches in three main fields: breakthrough technological innovations, access to content that customers find interesting and a new level of customer understanding. At the same time, operators have become much better at exploiting their existing and emerging high performance technological infrastructure.

Having access to similar customer data as telecom operators, the new players are able to draw their own conclusions and develop products according to customer needs. The risk for the telecom operator is that customers are getting used to this new wave of customer friendliness. Therefore, telecom operators are facing tougher and tougher challenges in a converging industry. To hold their own in this battle against the game changers, they need to know their customers much better.

1.3.1 Apple, expert in customer understanding

Traditionally a player in the hardware industry, Apple is "committed to bringing the best user experience to its customers".²⁾ Two business innovations illustrate how Apple is putting this vision into reality.

First, the introduction of the iPhone in 2007 was a revolution. Apple managed to exploit its consumer appeal and create a real pull for its brand. The company understood that customers would like to do more with the device than just make phone calls. When they launched the new iPhone, they integrated customer insights (values, needs, behavior, etc.) gained by analysis via test groups and surveys. Apple embedded the device in their existing ecosystem (iTunes, AppStore, Apple computers, etc.). They also integrated third parties, e.g. for application development, making the phone even more valuable to customers.

Second, Apple started its iAd service in 2010. It allows the company to analyze the behavior pattern of its 160 million customers in iTunes and the AppStore, and thus offer a tailored advertising platform to business customers. Retail users are analyzed in terms of

- > Website preferences
- > Internet usage behavior
- > App preferences
- > Music, TV and audiobook genre preferences
- > Locations
- > Devices
- > Demographics
- > Network

2) [http://www.apple.com/investor/SEC 10K filing for 2010](http://www.apple.com/investor/SEC%2010K%20filing%20for%202010).

Based on this analysis, Apple can effectively target customers for advertisements within its own app ecosystem. Apple did a very good job integrating all these functions in a user-friendly way, creating a unique customer experience in the process.

Conclusion: Apple's approach is tailoring its services and technical innovations to customer preferences and needs. The company understands its customers like no other by actively investigating customer behavior.

1.3.2 Google, expert in data mining

Google's philosophy is to "focus on the user and all else will follow".³⁾ Even if customers are not registered with any of Google's online services such as Google Mail, the company gathers IP addresses, search terms and browser types every time the customer searches for something. When users do sign up for individual services, their data is analyzed in detail. As users register for more services, Google is able to build an increasingly precise picture of the customer.

Here are some examples that underline the point:

- > iGoogle provides data about place of living (e.g. built-in weather forecast)
- > Google Mail reads and analyzes all e-mails
- > Google collects data about music and video preferences via YouTube
- > Google Maps provides information on possible travel destinations

Data is analyzed by complex recognition algorithms or by "just" comparing all available data records based on sheer computing power.

In particular, Google applies its data mining know-how to its product development process. Google Labs⁴⁾ offers service ideas and beta versions of new products. Users can either test and use the new software while Google evaluates their usage patterns, or give feedback directly to Google. This helps Google evaluate new products and get a fast and direct picture of the customer view.

Conclusion: Google's core competence is its capability to collect, analyze and interpret vast amounts of customer data and establish customer requirements based on this analysis.

1.3.3 eBay, expert in holistic customer understanding

One of eBay's main goals is to "create opportunities for people". The company therefore developed a holistic view of its customers, both buyers and sellers.

3) <http://www.google.com/corporate/index.html>.

4) <http://www.googlelabs.com>.

eBay stores more than 10 petabytes of data in its central data warehouse, and the number is continuously growing. Several thousand users have access to this central knowledge hub.

eBay is so successful because it can harness its holistic and integrated customer view to quickly generate innovations that benefit its customers. And this is not just a marketing promise. John Donahoe, eBay CEO, declared that "the major themes of [his] times as CEO have been a greater focus on customers and a greater focus on driving innovation". According to Oliver Ratzesberger, Senior Director Architecture and Operations at eBay, 85% of all analyses and requests that the company uses in its daily business are targeted at new and unknown topics. Centralized, integrated data is key to their strategic mission designed to "capitalize on this period of dynamic change in how consumers behave".

Furthermore, eBay has implemented what it calls "sand boxes" that allow in-house departments to use all the information in the data warehouse. They can then compare it against additional external data by means of an easy-to-use web interface and start experimenting. By doing so, users can generate prototypes based on high-quality data, spot flaws early on and generate extremely valuable new insights within days rather than months. The scalability, consistency and speed of customer data analysis allows eBay to act fast and on a low overall cost base.

Conclusion: eBay is not only a pioneering online auction platform, but also a best-practice example in several fields, such as optimal online experience and deep and comprehensive customer knowledge. This makes the company a leader in innovation through customer understanding.

Lessons learned: Companies such as Apple, Google and eBay define the benchmark for customer understanding. They identify customer needs and design goods and services based on innovative preference profiles.

Telecom operators are fighting with their complex data systems. They are busy making marginal improvements with tight technical and process restrictions. But the future of business does not lie just in more sophisticated databases and algorithms. A rethinking in management is required, going far beyond the question of how to manage and handle data. The philosophy change goes straight to the core of the corporate DNA: What does our customer want and how can we deliver it?

5) <http://www.ebayinc.com/values>.

6) HBR Interview with eBay CEO John Donahoe, HBR March 2011, pp. 92.

7) Ibid.

2. The customer-centric philosophy: From vision to best practice

"We have got to look at what customers expect us to do and deliver it. The biggest opportunity is to leverage that. We know if we use data effectively, give them the right products, services and added value, it will turn our customers into fans. If we don't, we will lose them."

James Morgan, head of CIC, Telefonica O2 UK, at Data Summit 2010

Traditionally, telecom operators in Europe see customers as a technical challenge. This was a valid approach when mastering the technical dimension in itself gave you the edge over your competitors. At the time, most telecom operators were more or less monopoly providers enjoying high margins with loyal customers. Those times are long gone.

The focus today must be shifted from the technology to the customers. This shift requires, most of all, a change in the company's philosophy. All their values, needs and consumption patterns must be at the core of the corporate strategy and serve as the benchmark for the entire organization. This new perspective requires a change in customer service processes and can turn innovation processes upside down. Moreover, companies' M&A initiatives will start to concentrate on other, more customer-centric target companies as the focus shifts away from technology.

In fact, our projects in the telecom industry show that management is moving in the right direction, although this move needs to be faster and more vigorous. Over the past few years, the focus was on fixed-mobile integration. Today, companies are trying to understand their customers better. We have also noticed that telecom operators often underestimate the amount of change involved, as the transformation usually takes years to fully unfold.

But where is the starting point? The process starts at the very top, where senior management has to develop a passion for the customer and lead the way towards the corporate philosophy. They need a vision and then have to define a customer-centric strategy that is anchored in the overall mid to long-term business strategy based on this vision. Every aspect and every strategic move should be considered from the customer's point of view.

The executive board should constantly push this agenda. They must make it clear to the entire organization that the exercise is not a fad, but a fundamental change in how business is done. With this persistence, the whole organization's mindset will change over time.

Let's take a look at the retail industry, which has very slim margins and slow growth. Here, innovation seems a difficult issue too. In response, retailers (traditional and online) had to significantly change their customer philosophy. The challenges they manage are similar to those of telecom operators today: They have to serve a mass market with complex product portfolios. We have included the following project example to highlight how other industries leverage their customer insights.

Project example 3 – Boosting profitability in the retail industry with customer-centric strategies

Challenge: A retailer suffered from declining customer satisfaction and declining sales volumes. The company was in no position to analyze the root causes as its customer segmentation was based on elementary demographic data only.

Therefore, the project goal was to obtain a better understanding of the customer base. The idea was to improve the brand's perception by customers, raise customer profitability and ultimately make the brand more attractive.

Solution: We matched individual purchase behavior data, generated via a loyalty card program, with national household panel information. This enabled us to analyze 60% of the total sales volume in depth. Based on this data, we came up with a sophisticated customer segmentation approach, including ten customer segments (such as "Young and fast cuisine", "Healthy nutrition" or "Conservative and demanding"). Together with the client, we devised a precise and highly differentiated customer strategy by

- > Identifying the effects of national consumer trends – such as a trend toward a lifestyle of health and sustainability (LOHAS)
- > Estimating how the segments defined react to these megatrends
- > Reviewing each consumer segment in terms of potential sales growth, profit and strategic attractiveness
- > Defining promising target segments based on trend, shopper and sales data
- > Attracting new customers to the focus segments and retaining customers in the secondary focus segments

We quantified each step based on customer data. This also helped us optimize store layout, so that the customers in the various segments could easily find all the products they are likely to buy.

Blue chip industry partners were also involved to help tackle the issue from a manufacturing perspective. Insights from shopper data help manufacturers optimize their ranges, make marketing more effective and improve promotion planning. In turn, the retailer gains insights into product development and can improve his relationship with the supplier.

This customer-centric strategy improved ROS (return on sales) from -1% to +2% within three years, an impressive achievement by retail standards. Our work also helped to improve brand and price perception, product presentation and service.

How can such a customer-centric strategy be implemented? We have outlined the key dimensions and stages of a customer-centric philosophy for telecom operators. To do so, we have integrated the data strategy dimension in Figure 4, applying the model described by R. Gulati⁸⁾ to the telecom industry.

Figure 4: A customer-centric philosophy cannot be developed without an adequate data strategy

	Stage 1 Centralized operations	Stage 2 Linear operations	Stage 3 Interactive operations	Stage 4 Holistic operations
OBJECTIVE	Putting together information in a centralized repository	Gaining insight into customers from past behavior	Developing an understanding of likely future behavior	Responding to customer needs in real time
MANAGEMENT LEVEL REQUIRED TO ACHIEVE OBJECTIVE	Corporate strategy leaders and IT	Corporate strategy leaders, analytics experts, marketing and IT	Corporate leaders, customer segment managers	Corporate leaders and cross-business integrators
DATA STRATEGY				
Sources	> Internal data only > Single data source	> Internal data only > Single data source	> Internal and external data > Multiple data sources	> Internal and external data > Multiple data sources
Scope of analysis	> Data storage and evaluation	> Data storage and evaluation	> Data mining	> Full-blown data storage and data mining
Interactivity	> One-way flows of evaluated data	> One-way flows of raw data for analysis	> Two-way flows of raw or evaluated data	> Proactive two-way flows of raw or evaluated data
Integration level	> Partially connected	> Connected	> Integrated or connected	> Fully integrated
Real-time availability	> Batch updates	> Batch updates	> Available at short notice	> Available in near real-time

Although the four stages look like linear development, it is an idealized process. We understand it as an iterative learning process where business adaptation and data strategy improvement build on each other.

8) cf. R. Gulati, J. Oldroyd: "The quest for customer focus", *Harvard Business Review*, April 2005.

At the start, the operator sets certain objectives (e.g. quantifying customer responses to new tariffs). Then it adapts its business processes, data collection systems, links and usage. In the process, management should evaluate each initiative from the customer's point of view (e.g. the customer value generated by a new tariff). As soon as the goal is clear, high-quality data can be generated to meet the objectives set (e.g. customer call center feedback on the new tariff). If the data is consistent and available, it helps to further automate customer handling.

As the organization moves along, management can draw conclusions from customer responses. These findings will then be integrated into the next decision cycle (e.g. tariff optimization in the next round). The whole organization is gradually moving from stage to stage, gravitating toward customer centricity.

European operators are at different stages of the model, and in reality, the transition between the stages is not rigid. Most operators more or less successfully collate information in centralized data repositories. They also analyze information in the functional units applying a linear operation, e.g. for retention campaigns. A few operators are implementing interactive operations and data strategies, while not a single telecom operator has end-to-end holistic operations throughout its organizations. As described in chapter 1.3, players such as Apple, Google and eBay are a few steps ahead on their way to holistic operations, thus stepping up the pressure on telecom operators.

As even more yet unknown players may enter the market, telecom operators should create the final stages of customer centricity fast. Whenever possible several stages should be implemented in one go. To fend off hostile competitors and devise truly sustainable strategies, they must start off with a holistic customer understanding based on reliable databases.

The drive toward customer centricity calls for the entire management's attention and must involve everybody in the organization. It extends beyond strategy and top management and goes all the way to include incentive systems for managers and employees. They must be adjusted in line with, and linked to, customer-related criteria.

The major stages on the way to full customer centricity are described in the following sections, illustrated with various examples of telecom operations.

2.1 Stage one: Centralized operations

In the first stage, customer knowledge is centralized and pooled, e.g. in one single data warehouse. All business processes are evaluated in terms of data generation, formats and frequency. Process data is unified and made available in a consistent form. All information is stored in a single data source. IT adaptations help implement business process modifications.

As far as data usage is concerned, central analytics teams evaluate data, draw conclusions and deliver these to the functional units such as marketing, sales or channel management. These in turn use the conclusions for reactive approaches in the market, e.g. for outbound campaigns. Due to data handling issues, fully centralized operations are not standard in the telecom industry as far as data management is concerned. However, in terms of business processes, most operators are at the next stage.

The following project example from the IT industry shows that even customer data gathered by resellers can help create centralized customer knowledge:

Project example 4 – Centralizing channel data for a leading IT company

Challenge: The company had no detailed view of its customers. Resellers used to store sales data in decentralized locations, with no access for the company. Without resellers participating, the company lacked key information about customers. Additionally, resellers were better at executing sales campaigns as they had direct access to customers.

Solution: Together with the client, we introduced a channel-focused CRM concept with centralized data and campaign management and automated customer analysis:

- > Resellers provide sanitized and aggregated transaction data and execute campaigns
- > The company provides resellers with CRM know-how, tailor-made offers, campaign proposals and budgets

A win-win situation for the IT company and the reseller was created by establishing a system that helps

- > Analyze customers and markets
- > Draw up reseller-specific customer reports incl. customer segmentation
- > Plan campaigns (select campaign templates, assign to customer address list, plan reports with predefined campaign KPIs)
- > Measure campaign performance with specific tracking approaches for each campaign type
- > Create a campaign toolbox and share best practice across the company

Overall, targeted marketing efforts helped increase sales by 12% in 2009 and significantly improve efficiency.

2.2 Stage two: Linear operations

The move toward linear operations integrates the functional units. Specialized marketing or sales campaigning teams use the data to resolve functional issues, such as making marketing campaigns more efficient. Data flows only in one direction as part of a formalized process: from the central data warehouse teams to the specialized teams. For example: Once a month a central team delivers a data dump of high-value customers to the marketing team, which identifies the preferences and designs campaigns accordingly. Realizing this kind of coordination requires organizational modifications. At this stage, designing standardized business processes is the key challenge for telecom operators.

In all analysis, planning and reporting processes, the focus should be on customer-centric KPIs such as customer satisfaction indicators and cross and up-selling ratios. These KPIs should be cascaded all the way from the executive board down to call center agents.

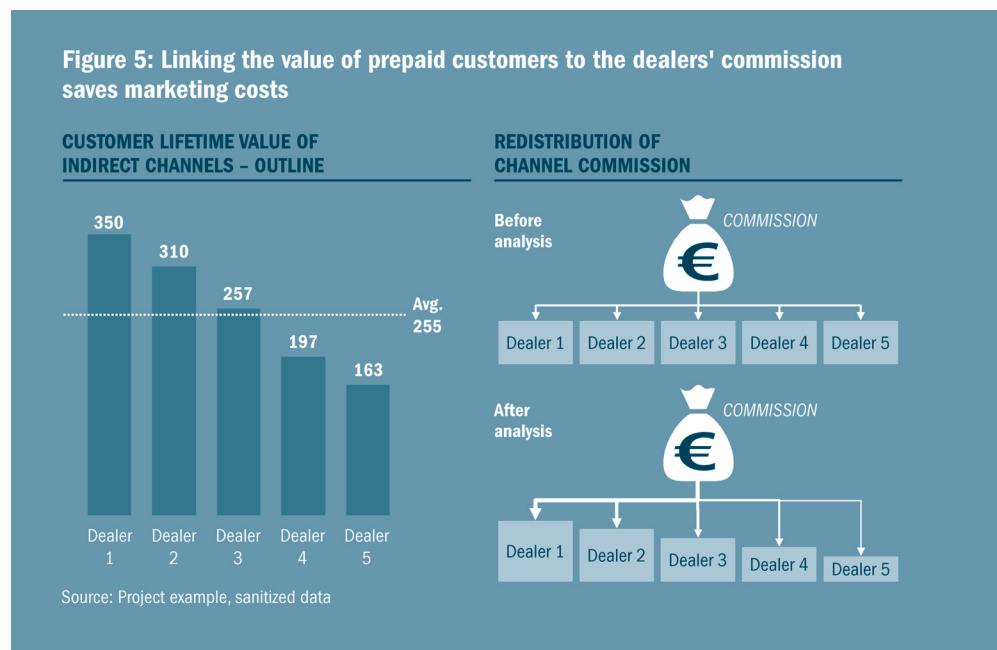
All operational network, marketing and customer sales processes are analyzed in terms of customer touch points. Outbound acquisition is a case in point. Customer profiles are evaluated by specialized sales teams in terms of buying probabilities for certain products. Within the sales channels, the shop agents receive up-selling recommendations via decision trees ("Next Best Offer") for specific customers. The decision trees are generated based on customer data analysis and integrated into the call center systems. Ultimately, processes are modified to support this linear exchange of information. However, feedback from the functional team to the centralized data unit is not institutionalized.

One of our recent sales optimization projects illustrates these ideas quite clearly:

Project example 5 – Finding value-based incentives for attracting high-value prepaid customers

Challenge: A significant share of telecom operators' gross adds are generated in indirect channels, i.e. via dealers that are paid a commission for signing a contract with a customer or selling a prepaid SIM card. Dealer commissions account for most of the marketing budget. For prepaid customers, dealer commissions are usually based on the number of SIMs sold.

Solution: We performed a value calculation, based on customer lifetime, ARPU generated and accumulated costs to find out what the true value of a customer was to the operator. As dealers will acquire prepaid customers with very different lifetime values, knowing which dealers generate high-value customers is key. This makes it possible for the channel management to steer commissions to the optimal channels and generate the highest total value for the operator (see Figure 5).



2.3 Stage three: Interactive operations

Interactive operations represent the next stage of customer centricity. Here, operators integrate interactivity into the work between their centralized and functional teams. They work closely together, and the information flows both ways. The focus shifts toward predicting future customer behavior rather than analyzing historical behavior. Therefore, tests and campaigns are used to evaluate customer behavior and optimize customer understanding. To illustrate this point, we look into the processes for churn prediction and retention campaigns:

Specialized churn prediction teams use models based on network analysis of individual call data provided by the central data warehouse. Each customer call is analyzed in near real time.

If a customer stops making some of his or her high-volume calls within the system or if one of his or her call parties leaves the system, the customer is considered to be at risk. To design retention campaigns based on the churn prediction model, the telecom operator can address the customer at risk proactively via outbound calls. All calls are recorded and evaluated by a voice analysis system. The system identifies key words to evaluate customer preferences, which are then used to help the agent define the offer for the customer.

The results of the campaigns and the customer preferences are played back to the churn prediction and centralized data warehouse team. They can (pre-)classify the whole customer base and apply the classification in other functional units, e.g. the shops. The units involved in the process work together interactively, and communication with the customer is an interactive process, too.

The entire organization has embarked on a continuous learning process. To get on this trajectory, companies are often organized by segment and set up special coordination units.

An example taken from the Russian market illustrates the churn prediction approach described:

Challenge: Russia's mobile operators are facing low customer loyalty with high churn and multi-SIM usage in a fully saturated prepaid market. A specific firm is aimed to identify at-risk customers in real time to set up counter-action measures when customers start to use a competitor's SIM card.

Solution: To detect at-risk customers, social relationship analysis of call data records (CDRs) for on-net and off-net calls is used. When identifying a customer who is likely to start using a competitor SIM, the customer is contacted through text message campaigns and calls. Obviously, this can be done only if the customer is still using his original SIM, either to spend the remaining prepaid balance or as a multi-SIM. When a customer logs onto the operator network, the company tracks it in real time using home location register (HLR) data. The customer, when on-net, is immediately contacted to prevent churn. In order to enable this approach an interaction between the units for network, data mining and call centers has to be established with fast reaction times.

2.4 Stage four: Holistic operations

This phase marks the final stage of customer centricity with a full change of customer philosophy. Here, customer knowledge is transferred to all day-to-day processes without delay. Employees have internalized the importance of the customer view and act according to it. At this point, customer understanding no longer relies on formalized processes but is integrated into the company culture. Coordination goes beyond the boundaries of the organization.

At this stage, companies typically adopt a 360° data strategy approach. All units have direct access to one single centralized and active enterprise data warehouse that is both highly scalable and able to flexibly integrate new sources. Telecom operators are able to use multiple internal and external data sources that are systematically integrated into one system. The data warehouse contains information from various internal and external data sources. A case in point is inter-branch loyalty program data that is shared through cooperation with retailers and reconciled to customer user data.

Patterns and clusters in usage behavior, e.g. user content preferences, are identified in real time. The data strategy enables active user group tests for new services, tariff price points, operator brand awareness, etc. Marketing units at telecom operators would be able to use input from other divisions. Call centers could use all customer information in real time to support the customer in his service and product experience. The same would be valid for employees with direct customer interaction, e.g. in the shop, and with indirect interaction, e.g. in network planning. At this stage, the network and marketing units cooperate smoothly.

The 360° data approach and the highly scalable enterprise data warehouse help implement and support holistic business process operations, and therefore represent the ideal long-term data strategy for operators. It goes without saying that technology alone will not do the trick. It is the analytics part, i.e. creativity and knowledge, that will make the data come alive and disclose the information it contains.

Two examples illustrate the way holistic operations can be achieved with a focus on data strategy adjustments.

Best practice: AT&T – From old-style systems to modern customer understanding

Challenge: AT&T is a leading US operator with 90.1 million wireless customers, 17.4 million broadband connections and 2.5 million IPTV subscribers.⁹⁾ Yet its prevailing processes and legacy systems caused many problems as complex business processes required complex and cumbersome data queries. As a result, customers were not served optimally.

Solution: AT&T initiated a philosophy transformation process aimed to make all data available in a consistent form for all users. Based on modified processes, the company unified the customer data structure and legacy system data was transferred to a relational structure. At the same time, it created a new enterprise customer data warehouse. It can now handle about 1.6 million queries a day and serve approximately 1,800 active users from all business divisions. In the process, it has also optimized product designing, time-to-market and customer analysis in the specialized analytics teams. The results are better sales channel performance, an increase in revenue and higher customer satisfaction.

The key success factors for the transformation were:

- > Top management attention
- > Professional data architecture plus external implementation support
- > Data warehouse structures tailored to customer needs

Best practice: Bouygues Telecom creates "one reality"

Challenge: Multiple interfaces and manual work slowed things down considerably. The existing system landscape at Bouygues Telecom, a French operator, featured more than 300 individual systems and many data silos. There were high maintenance and development costs.

The company needed to understand its customers better and reduce system costs. It also wanted to make its decision-making process more effective and improve in-house business intelligence.

Solution: Overall business intelligence was consolidated at company level, with all areas sharing the same data. A new data warehouse for 3,000 users from 30 business units and divisions including call center agents and point of sales employees was set up. The company now has only "one reality". Detailed and consistent data generates flexibility and simplifies analytical processes. To draw conclusions, the analytics teams can answer questions on the basis of a unified customer database. Overall, introducing the data warehouse cut the cost of business intelligence services by 33%.

9) As of end of Q2 2010.

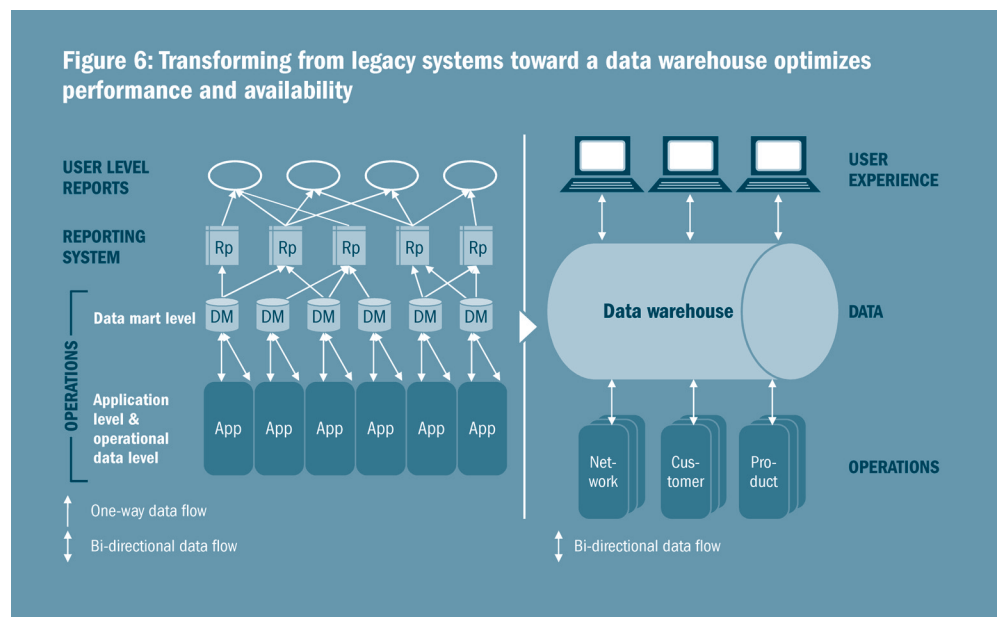
2.5 How IT supports the transformation

"When we began construction of the data warehouse, we realized we needed to arbitrate needs and prioritize business requirements, because there is never enough money to do everything that everyone wants. So we needed a plan that would help us combine agility with strong governance for our data warehouse environment."

Yann Decre, business intelligence director and chief data officer for Bouygues Telecom, from Teradata Magazine Q3/2010

The transformation process is also an IT and investment issue. Given the complexity of IT specifications, the high impact of the transformation on the whole organization and the long time horizon, the success of implementation is far from a foregone conclusion.

In our experience, projects often fail because project management is inappropriate and the implementation challenges are underestimated. Choosing the right system support is crucial for the transformation success. We recommend selecting a strong partner with a clear vision, a centralized approach and strong execution capabilities. Companies need state-of-the-art systems, i.e. an enterprise data warehouse, to solve issues with data silos, incompatible interfaces and consistencies. Figure 6 contrasts a typical legacy system structure with the data warehouse solution after implementation.



The business process adaptations have to be translated into reliable technical software specifications. Operators have to review IT solutions proposed by vendors in terms of feasibility of implementation, hardware requirements and costs. The results need to be discussed with the divisions in another feedback loop.

Gartner's "Magic Quadrant for Data Warehouse/Database Management Systems" or the Forrester Wave for "Enterprise Data Warehousing Platforms" can serve as an initial source of potential vendors. The market leaders are Teradata, IBM and Oracle.

As soon as the vendor has been chosen and the business process adaptations have been designed, implementation planning must be finalized. We recommend conducting the software transformation with a professional project management team. It makes sense for the system vendor to work closely with the divisions of the telecom operators. The project team should be responsible for carrying out and managing new software and hardware installations and training the employees.

The system should be introduced step by step so as to reduce risks. It is reasonable to work on selective business processes at the beginning, e.g. merging fixed and mobile data silos, before implementing voice analysis systems. It is much better to have partial results early than wait for the complete picture. Such a gradual approach helps integrate the lessons learned from the first tests and initial operations.

The complexity of the transformation and the IT implementation should be mapped in a robust business plan that evaluates all costs and benefits. The main direct costs of the project are in the external support for introducing the new systems, training in-house employees, acquiring software licenses and new hardware. Then, maintenance, hardware replacement, energy, floor space and personnel costs incurred when the old systems are phased out have to be taken into account.

In many cases, the investment is well worth it. Direct costs that can be saved by replacing disparate systems pay off in the initial phases of introducing a single integrated solution. Realistic savings should be evaluated in close collaboration with the vendors.

Indirect cost savings are more difficult to evaluate, e.g. higher call center efficiency is difficult to quantify in advance. To avoid defining target values that turn out to be too ambitious, it is helpful to cooperate with the vendors and use their contacts with other companies. Operators can estimate realistic savings in open benchmarking and in discussions with competitors that have introduced comparable systems.

Evaluating the revenue contribution to the business case is much more difficult. On one hand, additional revenues are a major driver to the case, on the other, predicting exact numbers for future revenues is difficult. We therefore recommend assuming very conservative revenues. Sometimes it even makes sense to evaluate revenue effects but not to integrate them into the business case. Such effects include reduced times for resolving business issues or faster responses to changes in the market.

The business case must include old and new IT operations in parallel for a period of one to two years, as there may be issues in the ramp-up phase. Parallel operations enable the transition to proceed smoothly.

In large IT projects, it is essential to get your priorities right. This is why the executive board should be permanently involved. What's more, tight cost control is required to meet the business case targets. All the players and stakeholders involved should align their interests in regular meetings. To keep all involved highly motivated, everybody should be made aware of milestones reached. Initial campaign successes based on the new system should be celebrated together.

3. Outlook

"I actually think most people don't want Google to answer their questions, they want Google to tell them what they should be doing next."

Eric Schmidt, CEO of Google, in The Wall Street Journal Europe, August 16, 2010

Customer centricity will separate the wheat from the chaff in the telecom industry. In the long run, consolidation in the market will be driven by customer orientation. You either know your customers or you're out, gobbled up by competitors that know their customers better. In other words, the players in the telecom industry will differentiate themselves in terms of how customer-centric their strategies are, and their ability to implement them in the next decade.

Customer-centric operators will follow our holistic customer philosophy and gradually align their business processes to their new strategy. In doing so, new technologies will efficiently support their customer processes. New forms of interaction as defined by today's social networks will also change the way they see their customers. The winners will understand these changes and adapt their business processes fast and rigorously.

Today's management vision will turn into customer-centric reality in the future. Even if the timeline is difficult to predict, we believe that the first telecom operators to handle their customers in a holistic manner will emerge in three to five years.

The rest – the "chaff" – will fail to transform and adapt their business models quickly enough. They will remain stuck in the old world, and disappear. We all know the famous examples from other industries – former icons crumble and vanish because they lost sight of their customers' true needs.

Management still has to provide the answers to some key questions: What do our customers really want? How can we anticipate and identify their needs? And how can we create products and services that fulfill these needs? The answers tomorrow will be much more sophisticated and customer-specific than today. But if operators find the right approach and answers, they will hold their own in an increasingly contested market.

The authors



Klaus-Ulrich Feiler

Partner

Roland Berger Strategy Consultants, Munich

Phone: +49 160 744-8666

E-mail: uli_feiler@de.rolandberger.com



Klaus Fuest

Principal

Roland Berger Strategy Consultants, Düsseldorf

Phone: +49 160 744-2231

E-mail: klaus_fuest@de.rolandberger.com



Dr. Marcus Steiner

Senior Project Manager

Roland Berger Strategy Consultants, Hamburg

Phone: +49 160 744-4323

E-mail: marcus_steiner@de.rolandberger.com

Amsterdam
Bahrain
Barcelona
Beijing
Berlin
Brussels
Bucharest
Budapest
Casablanca
Chicago
Detroit
Düsseldorf
Frankfurt
Gothenburg
Hamburg
Hong Kong
Istanbul
Kyiv
Lisbon
London
Madrid
Milan
Moscow
Munich
New York
Paris
Prague
Riga
Rome
São Paulo
Shanghai
Singapore
Stockholm
Stuttgart
Tokyo
Vienna
Warsaw
Zagreb
Zurich