The all-connected consumer
Digital Transformation in the Telecom Market
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Preface

Atos Consulting helps you realize your future-proof efficiency, agility and improved topline. Our key to success is coupling the right strategy, process design and innovation with IT. We are motivated to work with you and your staff to achieve this challenge. Our clients view us as leaders in commitment to implementation.

We are Atos Consulting. Powering progress

To support this work, our consultants continuously monitor the latest trends and developments that drive innovation and influence market dynamics and business models in the telecom, media and technology industry. Each year our findings are published in a white paper and this year we have investigated which consumer trends are most attractive for operators to pursue.

This white paper is an extension of the scenario planning we published last year that investigated the forces that influence value chain dynamics and the increasing role of data.

We hope that it will help you anticipate and prepare for the challenging times ahead!

Atos Consulting

Executive Summary

We live in an All-Connected world. Never before have phones and connecting infrastructures been so widely used by so many. Yet telecom operators face being pushed into playing a marginal role. Their classic business models have come undone, eroded away by new, more agile and digitally powered competitors who derive their topline from other business models, those based mostly on revenues not from paying consumers, but from advertisements.

In our 2013 White Paper, ‘Balancing the Power in the Telecom Value Chain – is it up to data?’ Atos Consulting described four potential future scenarios for telecom operators. Our preferred scenario stated data would lie at the heart of the search for new revenues. In this paper we develop that idea further, outlining a new type of data rich consumer – one that is ‘all-connected’.

We believe the ‘all connected consumer’ is at the heart of making data a future revenue stream for telecom operators. Operators need to define strategies for diversifying their portfolio while adjusting their network cost structures. Through our research, we have identified 10 trends and services which we believe the all-connected consumer is willing to pay for.

Success now rests with operators’ ability to meet the challenges presented by these trends. As well as clearly defining these new profitable revenue opportunities, they need to simultaneously chart a clear migration strategy to an all-connected environment.

Key to this is aligning service portfolio and service delivery with the needs of the all-connected consumer. This means acting as a central privacy broker and orchestrating network, device and service capabilities. Those operators that can’t or don’t want to commit to this transition will instead have to adjust their operations to become lean connectivity pipes. Those who do will embark on a journey of digital transformation; one that we believe offers the most opportunities in the future, and the one that is the focus of this paper.

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Atos Consulting
**Chapter 1 - Introduction**

Back in 2008, Paul Krugman said, “Everything that can be digitized will be digitized.” This present day, only six years later, it seems better to adapt this to “Everything that can be connected will be connected.”

We believe that connectivity and the ‘all connected consumer’ is at the heart of future revenue for telecom operators. It is a search for new revenue they must undertake because the landscape for operators is becoming more diverse every year, with more parties becoming involved in the service delivery value chain and taking up more of the ‘share of wallet’ of consumers.

While consumers are generally inclined to pay for services, this willingness does not extend to a sufficient degree to the traditional services telecom operators supply. Telecom operators face intense pressure from the services provided by other parties in the chain and where the willingness to pay from consumers is more pronounced. Examples of this are Netflix, Spotify, Google Music, Blende and iTunes, as well as the popularity of expensive smartphones from Samsung and Apple. In addition, telecom operators face (local) pressure even on their own turf.

As one operator executive told a recent industry conference: “We think we’ll have the best voice product out there. It’ll use the least amount of bandwidth, and we’re going to optimize the hell out of it.”

In their search for new revenue, telecom operators face a double dilemma: more demands from consumers who seek more choice, functionality, transparency and lower costs, and also from financial markets and investors demanding continuous high returns and the long term promise of growth. At this juxtaposition there is a pressing need to diversify the service portfolios. At the same time, the way in which these services are delivered must be rationalized.

In our 2013 White Paper, ‘Balancing the Power in the Telecom Value Chain – it’s up to data’, Atos Consulting described four potential future scenarios for telecom operators. Each scenario detailed a way forward for the operator. Our preferred scenario stated that data would become the new liquid gold and that this would lead to a twosided business model. On the one hand, the consumer would be able to trade their personal data – in an environment of their choosing – for personalized products and services. On the other hand, operators, from their position as ‘spider in the web’ in this service delivery chain would be able to offer the services they know clients value most.

But key questions need to be answered here: Are consumers willing to trade their personal information and privacy for personalized content and products? Which content and products would seduce consumers? How must operators optimize the delivery of content and products to make money out of that desire from consumers?

In this paper, we identify the top trends and concepts we believe to be seductive to consumers and the telecom sector. To benefit from the emergence of these trends and concepts, telecom operators will need to undertake a journey – one of digital transformation. As we show, operators who embrace the digital transformation journey will emerge prepared to capture new value in their portfolios with increased capabilities.

**Chapter 2 - The all-connected world**

Today’s world is one characterized by rapid technological change. The opportunities are already there and operators are poised to take advantage of them. Furthermore, consumers quickly change, adopt and create the need for new applications and services which set a new standard for the user experience. The shift can be seen as one from device-centric to connectivity-centric. New catch phrases like smart mobility, big data and mass customization suggest and provide opportunities for individuals and businesses to connect and interact with one another.

In this chapter, we describe 10 emerging trends that we think will become increasingly successful over the coming years. These will also feed into the products or services that consumers are increasingly willing to pay for. The value exchange isn’t necessarily for money either. Consumers have shown a propensity to use the value of personal data in exchange for additional products and services. Therefore organizations will start to offer every imaginable service personalized to the consumer needs and preferences. Even before the consumers know they want it. All these services will generate an enormous data flow that consumers will want to be able to control and keep secure.

Research approach

To identify these emerging trends, we first analyzed the kind of personal consumer data that could be relevant for the telecom sector in order to boost their business model. Here we decided to focus on new data like consumption behavior, social media, interests and geographical information, as this data has the most promising usage potential. Next, we investigated the possible applications for the data and the emerging services already in use. After inventorizing all the possibilities and services, we translated these into opportunities for the telecom sector. To validate this, small surveys among selected target groups were run to determine the consumers’ willingness to pay for the product or service.

Health monitoring

Whether you want to work on your health goals, preventively track your blood pressure or heart rate, or monitor an ailment, personal health measurement devices like monitoring bracelets and self-measurement devices are gaining popularity. Patient data such as heart rate or blood pressure can be sent to a doctor for analysis and advice. Imagine having doctor consultation minutes on your phone so that you decide how often you want professional advice. Consider devices like Scandi (www.scandi.com) or apps like Qubitlab (www.qubitlab.com).

Opportunity: For operators, this could mean becoming a trusted third party or a mediator for providing such services via mobile apps, or saving, storing and forwarding personal health data to health companies. Such systems can significantly reduce healthcare costs and many health operators are interested in subsidizing their deployment and use.


3. According to our definition, new data is consumer data which is increasingly available through the digital and connected world in which the modern consumer is moving. This is in contrast to existing ‘traditional consumer data’ such as name and address which can also be very valuable for business purposes, but only passively generated (with little to no actively generated personal data) and not necessarily leading to new (fintech) products and services.
Imagine paying with your smartphone without personalized content and advertisements on any kind of device. A possibility for operators could be working together with content producers to offer personalized customer experience based on the collective information that can enable new services such as the innovative HeadsUp application (www.http://thenextco.com).

Opportunity: Telematics is one of the most dynamic and fastest-growing segments of the cellular machine-to-machine market, which itself will take a growing portion of all cellular subscriptions, increasing from 2.3% in 2012 to 6.8% in 2018. For telecom operators, telematics could be a valuable source of information and collaboration.

Opportunity: Operators can expand their services by working together with energy suppliers or electronic device producers. This could offer opportunities to gather data about customers’ (calling) behaviors, for example to determine when is the best time that someone is willing to take a call.

Opportunity: Operators could form alliances with organizations within the tourist sector, with profits based on a percentage per transaction. This innovation is very suitable for affiliate sponsoring and could be offered for free.

Opportunity: Operators are in a strong position to develop this innovation as they can relate mobile devices/subscriptions to an individual. Authentication could be offered as a premium service, combined with affiliate marketing based on a percentage per transaction.

Opportunity: What if you could reduce by 50% the time it takes to fill in your personal details? After successful identification with your smartphone and fingerprint, relevant data about the owner can be shared across a secure channel. Applications include digitally signing documents, decreasing the waiting time at airports by automatically filling in forms, checking into a hotel without the need to enter any information, etc.

Opportunity: Envision getting travel information that is tailored to your own needs and wishes. Operators have (potential) access to an enormous amount of data about customer interests and location. This profile is gathered through online search data, places that were checked into via Foursquare, movies liked on Facebook, artists listened to on Spotify, places visited by friends and rated on trip advisor, and possibly even information from personal emails.

Opportunity: Telecom operators can expand their current business models to payment alliances with banks or other payment operators to deliver services like the digital wallet (HCE supported NFC payments). In addition the added insights into their customers’ digital footprint will give them the opportunity to personalize their offerings.

Opportunity: Imagine a car that can interact with its environment. Before even arriving at the garage (Car Repair / Dealer) for maintenance, the car sends data to the garage about its status, the last service interval and parts that need to be replaced soon. Your car combines historical (pattern) data, personal information on your smartphone, social media or computer, so that the collective information can enable new services such as the innovative HeadsUp application (www.http://thenextco.com).

Opportunity: Mobile Payments

Opportunity: Imagine a house where all your electronics interact with each other. This new trend is called domotica, which means connecting the home to create a living experience with all devices connected and automated. Think of a smart TV which alerts you about incoming calls and mutes your speakers automatically.

Opportunity: Operators could work together with content producers to offer personalized content and advertisements on any kind of device.

Opportunity: Personal Travel Information

Opportunity: Smart cars

Opportunity: Smart house

Opportunity: Personalized online experience

Opportunity: Authentication Provider

Opportunity: The all-connected consumer – Digital Transformation in the Telecom Market
Positioning to capture value

There are a lot of possibilities in the realm of the smart use of personal data. But, based on our research, we see the trends described above as having the most revenue potential in the coming years. But who can deliver these trends to the marketplace in a financially viable manner?

Well, herein lies the opportunity for operators. They are the ones who are uniquely qualified to extract value in that service value chain because of their large consumer base, existing infrastructure, and the trust that the consumer places in them. In terms of scale of their customer base, operators also have an existing network of consumers from whom they can collect all sorts of data. And operators already have the basic infrastructure in place to extract value from that data when allowed. Finally, in terms of trust, operators are able to exploit their existing billing relationship with consumers, something which will speed up the adaptation process.

In the previous chapter we outlined 10 data-based products and services we feel are likely to induce a greater willingness to pay from consumers. We strongly believe that operators can play an indispensable and valued role in bringing these products and services to the consumer. But to do so, the operator must change its service portfolio. Therefore, in this chapter we examine the characteristics of a service portfolio based on data and consider the levers telecom operators should examine in order to achieve a greater willingness to pay from consumers.

The products and services presented in the previous chapter are sometimes new and sometimes known, but they all represent a much larger contingent of products and services that have substantial earning potential for operators. In this era of personal data economy, where personalization and the individualization of services becomes a key winning strategy, consumers are more aware of their digital footprint and the way in which their data is used. Consumers increasingly face a choice about where and with whom to leave their data.

As intermediaries of data, telecom operators are well positioned to monetize the substantial information they have available on their clients. For operators, this means that being a trusted and reliable source of data handling, and being able to deliver relevant personal information, will make them an indispensable and valuable part of the value chain that delivers applications to the consumer.

To do so, operators need to ensure that the relevant information flows come together in combinations which add value, in the right way and at the right time, to their consumers. Compare this to the delivery of a head-up display system when needed. Or look at the way information flows are brought together in a structured and timely manner in any kind of market place to those that need it, being it the online businesses of Amazon or Alibaba or the physical market place of a small town.

Additionally, operators should position themselves as the “guardian” of privacy for consumers. To this end, telecom operators need to ensure:

- Transparency: give the consumer an overview of who holds which personal information – the position of coordinator gives the telecom operator the ability to do so.
- Control: provide consumers with the ability to determine which party can do what with which piece of information.
- Trust: ensure that consumers can completely trust that their data is not going to fall into the wrong hands.
- Monetization: give the consumer the opportunity to use their own information to create value.

So this represents more than just the innovation, agility, short time-to-market, and social analytics which form the backbone of the current strategies of many telecom operators. Rethinking is needed about where strategies should support a portfolio that focuses on services that put the privacy needs of the client at its core. This could also be a determining factor in creating added value for the operator versus OTT players who have already built up a less than favorable reputation when it comes to respect for privacy.

Here it is also important to recognize that there are currently legal and social obstacles to implementing certain data usage concepts. To overcome these, it is essential to be extremely prudent with the four key trust elements mentioned above.

In the next chapter we discuss the way in which the delivery of these services can be realized through the digital transformation journey.
Chapter 4 - The digital transformation journey

So far this paper has outlined 10 trends in products and services that we believe have the potential to be attractive to the all-connected consumer. In addition, in chapter 3 we described how operators will need to diversify their service portfolio to become an indispensable and valued player in the service delivery chain of those trends. To achieve diversification in a cost-effective manner, operators will need to adapt their service delivery. The way in which they should do this is the focus of this chapter.

To adapt their service delivery, operators will need to transform their legacy infrastructure. At the same time, more and more parties are involved in the end-to-end service delivery chain. Therefore, to operate both elements successfully, operators need a flexible and open IT environment. In this scenario, digital all-connected transformation is the best way forward. It gives flexibility, while reducing operational costs, through liquid infrastructures that rise and fall with demand. Operators thus can reposition their infrastructure while at the same time enhancing the effectiveness of their IT.

These four technologies interact with each other, thus strengthening the combined potential. Cloud technology will enable you to cost-effectively use Big Data analytics, Social media thrive on the ubiquitous smartphone. Finally, the all-connected consumer requires a gutsy, but also balanced use of elements of all these four technologies to get to know the benefits and value on offer and so seduce him or her into paying for the operators’ services.

Big Data / Analytics: Here, the future value lies in using data to derive insights in real time in order to become more competitive. Big Data is the name for the combination of the storage of access to, and analytics of huge quantities of structured and unstructured data that can give the operator the insights it needs. Not only in the efficiency of their own business operations, but also into the needs of their consumers. In short, get your consumers the information they want, when they want it, where they want it, and how they want it, and do so in the most effective and efficient way.

Cloud: Cloud has now reached a tipping point to create and deliver true business value. The potential flexibility in cost, control and scalability can help operators focus in order to transform their legacy infrastructure while at the same time enhancing the effectiveness of their IT.

Social: New IP-based forms of communication offer a single, accessible location to collaborate, organize, innovate and exchange information. In this collaborative environment, where staff and consumers alike can contribute and share, the collective knowledge of an entire organization is brought together and focused on servicing the all-connected consumer. And this is just looking inward. Looking outward, various social media, which are now the playing field of the OTT players, offer operators a brand new way of connecting with their consumers.

Mobile: The potential for operators to capitalize on the rise of smart devices, providing consumers with computing and commerce on the move, may seem obvious. However, the challenge lies in the simultaneous ability to improve the consumer experience while increasing revenue streams from data. The mobile society offers the clearest opportunity to do this.

The need for transformation

To overcome the mismatch between the current strategic focus of operators and the required focus, initiating the journey is just a first step. An operator does not transform within a single program via a middle management workforce. Rather, multiple phases of a digital transformation journey need to be completed, and top management commitment is vital.

Atos has the expertise and resources to help operators achieve all the different stages of the journey. The table below identifies three key aspects which need to be taken into account in every digital transformation journey business strategy design, technical solutions and mockups, and transformation. In the table, these aspects are shown surrounded by a number of approaches and solutions that are available to support a successful realization. Most are generic, except for those around the technical solutions and mockups which are all Atos proprietary solutions and platforms aimed at enabling Social Collaboration (BlueKai), Mobility (Mobility Platform), Analytics (Atos 360), and Cloud (Canopy).

Thus, the digital transformation journey begins with business strategy design. This starts by making the role of ‘coordinator of information-guardian of privacy’ central to the whole approach. Here, Atos’ expertise in realizing the key plateaus of the digital transformation can help by further elaborating the business model design. After the technical solutions and mockups are designed, the transformation journey is brought to its final destination.

Throughout the journey, Atos’ risk sharing model ensures a partner approach to ensure the successful implementation. Our digital transformation story is a way for operators to adapt, and Atos is ready to guide operators in this transformation. Atos’ broad experience in this sector means that we have the skills, capabilities and proven record to be your End-2-End partner during your entire Digital Transformation journey.

Table 1: Platform centric approach to the Digital Transformation Journey

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<td>Cloud</td>
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<td>Business Model Design</td>
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Acknowledgements
The authors would like to thank Michel van Buitenen, Tom Konings, Ed Megens, Chris Shano, Brechtje Boer-van Elsden, Leven Doreme, Maartje Geerts, Johannes Lock, Maurice van Seeters, Dion Vermanien, Neville Schaken, Daan Meerdink, Floris Blonk, Thom Zorn, Gert Megens, Rutger Fichtinger, Martin van Weersendburg, Sacho Vogelang, Simone Mandigers who have been instrumental in the successful drafting, completion & reviewing of this White Paper. Without their support and dedication this project would not have materialized.

Last but not least, the authors want to extend their gratitude to all the participants of our surveys and the senior executives who participated in the Executive Round Table Telecom 2013 for sharing their insights and opinions freely.

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