

# 2017 Telecommunications

Competitive trends analysis



RAFT

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# Four trends for digital durability and competitive advantage

## Introduction

In an increasingly connected ecosystem of digital products and services the mobile phone remains the central point for customers. Telecommunications (Telco) is the keystone sector of connected networks such as personal connectivity, Internet of Things (IoT), intra-business, smart city, and smart nations. The industry also covers content consumption, communication, mobile payments, and network security. In short, telco networks are the connectivity hub for consumers and businesses worldwide.

Ubiquitous connectivity is here. Data is the current central currency for how the telco industry connects to customers **wallets**. The services used on that data pipeline, connects to users **minds** and **hearts**. As the telco industry races to the bottom in price cutting for data, **what becomes the new competitive advantage?**

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The following document looks at four trends Raft has identified as areas of competitive competence. They build digital durability as data becomes a utility and margins erode. This list is not exhaustive but rather a result of our interactions with telecommunications companies across the globe in 2016 and trend watching. Each trend has its own applications within its own market.

## 1.

### Digital Customer Service

From retail, to support, to network, and enquiries, a move to 'Digital Transformation' means embracing investments into more intelligent and smarter forms of customer service.

Companies will need to experiment with bots, beacons, facial recognition, in-store analytics and autonomous customer support services to reduce costs while building stronger customer profiles to serve them better.

## 2.

### Security & Encryption as a service

Several years after Snowden, the US, EU, and the world overall are starting to recognize the need for security, encryption, and privacy of their personal information.

From phishing scams, ransom viruses, and open wifi, protection and privacy of personal information and encryption of data will become a competitive advantage.

## 3.

### Sell services, not data

As data turns into an undifferentiated utility, the telco industry will need to find new ways of selling and presenting data usage.

As with early cable TV providers, telcos should focus on product bundling to create best in class aggregated services. Telcos must move to selling products that use their network, and not their own network packages.

The IoT, Smart Home, and Smart Office spaces are key investments in this area.

## 4.

### Exclusive Content

The decline of data as a core source of margin and recurring monthly revenue (RMR) has led companies to look at forming deals with content providers to offer exclusive, or zero rated content, as a competitive advantage.

Starting years ago with companies offering free WhatsApp services, this has grown into offering lower rates on services such as Spotify, Netflix, or YouTube. Companies need to investigate and assess this approach, while being weary of customer perception of the erosion of net neutrality.

# 1. Digital Customer Service

Millennials want a hands-off relationships with their subscription and retail services. They are not interested in being sold to. They want products that fit into their lives and survive on their own merits. Retail experiments like Amazon Go offers the essential user interactions (grabbing what you need and leaving) and nothing else, even automating the payment methods. It highlights cost savings in staff, quicker customer consumption of products, and products that sell themselves.

Millennial customers expect to pay for what they use, get a good deal based on their habits and not to have to spend effort managing their accounts. This 'set it and forget it' behavior means a drop in retail visits and an increase in predictive and personalized customer service when they do need help (7).

As telcos look for areas to reduce spending and increase value, they must push towards smart use of retail areas, and leverage partners. They must increase automation and leverage digital touch points to increase the speed of transactions while making everything more personal.

“... a smartphone app and various other types of technology in the store had **eliminated the usual bottleneck of cashiers and registers** that typically stand between shoppers and the store exit.”

- [Amazon moves to cut checkout line](#)

## What if customer support was done by customers for customers?

Companies lean on internal staff, scripts, and vendors to provide customer support. They hire call centers or make one time FAQ's that are rarely updated. **Companies need to invest in crowdsourced help systems that are dynamic, changing, and growing based on the needs of millions of customers.** A self-regulating forum and support system, that users populate with questions and answers in return for benefits like discounts and status is one such investment.

Existing customer service channels are already strained with high wait times. Companies instead need to facilitate a community of users and empower them to support each other.

Insights from this forum can be put back into the business and inform planning for future services and products (1). This ultimately reduces costs and leverages broader knowledge sets by utilizing users knowledge and self regulation. Companies can see issues to resolve and requested features in real time. This provides a view into customer aspirations and needs. This type of engagement with customers builds stronger relationships, and can grow brand ambassadors over time.

## Examples

*Quora / Apple Forums / Intuit Community Forum*

## What if customers never needed sales staff in a store?

Investment in digital retail methods are allowing for quicker sales and support with a reduced investment into staff. QR codes allows customers to make purchases on an account without staff interactions, while AmazonGo just introduced a way to shop without checking out (2). Across the world, new ways are being created to allow for users to shop with the ultimate convenience (3).

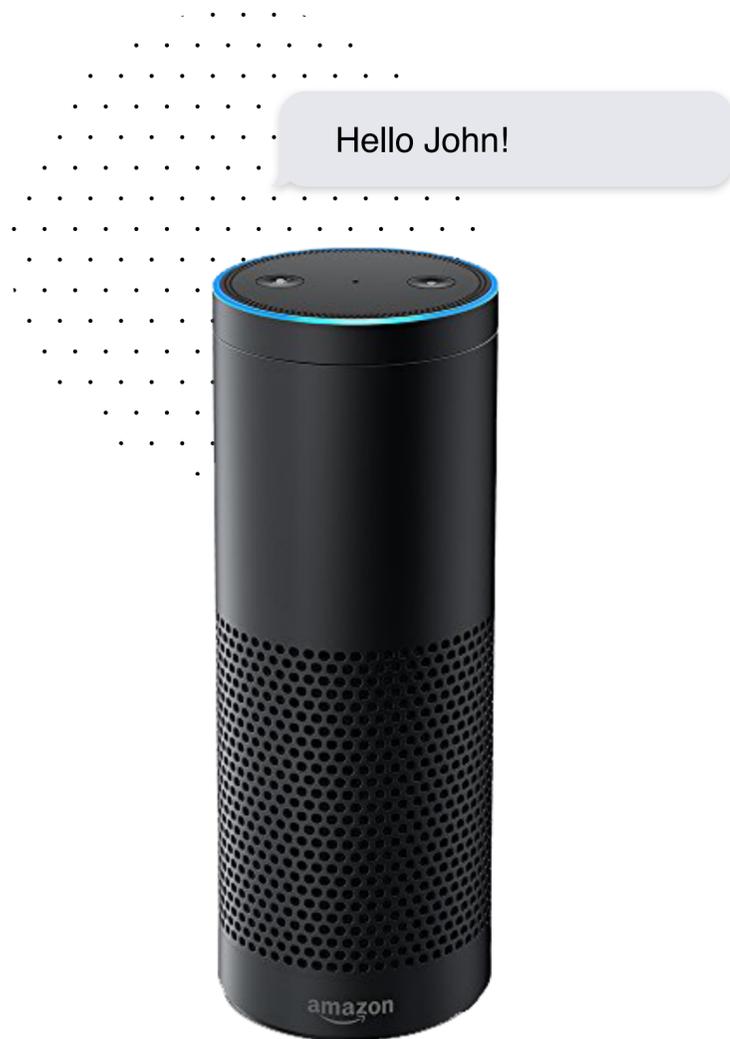
Imagine a customer breaks their phone and can walk into a store and immediately get a new one without speaking to a sales agent. All their information is ported to the new devices by automatically validating their identity.

Amazon has long been exploring ways to simplify payment for their customers. The well known “one click to pay” on their web shop has been a great success. Companies need to find ways to replicate that ease of use in the physical space. When customers don't need to spend time managing and navigating a store or purchase options, they are more inclined to buy. If retailers can't compete with online, they may face closure (4) or worse.

## Examples

*Amazon Go / 'Uberization' / Coop 'Supermarket of the Future' / Carrefour "Philips indoor positioning technology"*

# 1. Digital Customer Service



“The experience is **akin to chatting with a friend**, “the one whose taste you always trust while you’re shopping” ... There’s just one thing: The entity on the other end talking to you and helping you choose the shoes **is not human**”

- [Facebook bets on bots for its messenger app](#)

## What if customers felt as comfortable with a bot as with a person?

Whether it’s informing customers of their charges, giving frequent travelers advice on roaming fees, and letting them know when to turn on VPN, bots can manage customer accounts ensuring they have the best and safest services at all times. To engage customers, bots can be presented beyond complaint support and sales. They can also aid customers to manage their accounts, give proactive advice, and keep their data secure. **A bot done well, is an extension of a company brand and a customer companion.**

Bots are routinely used in customer support or to provide customers with the latest up to date information. We see the baseline of bots as covering the basic functions and repetitive tasks such as top-up, roaming issues, trouble ticket transparency, billing statements, and network issues. Financial services are already investing in these areas (6). If a bot can become an invaluable communication assistant, they go beyond a support mechanism and become a data management, security, and support companion provide information on where family members are, to reminding users to turn on VPN, and storage service of sensitive information.

### Examples

*Apple / Rackspace / Trader Joes*

## Imagine knowing which customers need a human touch as soon as they enter a store.

Facial and emotional recognition offer new tools to design for human emotional states. Many of the frustrating interactions we experience today can be lessened when our surroundings appear to be in sync with our state, and recognize us.

In-store analytics offer facial recognition, product tracking, and customer tracking (5). Stores can know if customers are agitated or annoyed, and staff can serve them sooner. They can also know when a high value or VIP customer enters the store before they even check-in. Bio-metric authentication offers a set of unique security features to customers that is hands-off, safe, and easy-to-use, making transactions frictionless once engaged. Users can scan a finger for authentication for a purchase or to check-in.

### Examples

*Apple Touch ID / Facebook / Alipay / Monolith (AMS company)*

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## 2. Security becomes a rising concern

While increasing network coverage to more users, in more areas, and across a larger variety of verticals (mobile, business, IoT, smart cities, broadband, fibre, 5G) telco companies are also approaching ubiquitous omni-connectivity. This poses greater security risks than ever before, for both companies and individuals.

Businesses, especially small and medium sizes, are looking deeper into encrypted networks, password storage, and VPN's to ensure safety against malicious attacks. As consumers increase their data usage and exchange, they will look for providers who offer encryption and VPN services. As globalization ensures companies can work across borders, this also calls into question individual government regulations and privacy of data across borders. **Security and privacy will now become new areas of competitive advantage for telcos.**

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“And many of those worried about expanded government surveillance by the N.S.A. and other agencies have **taken steps to secure their communications.**”

- [Protecting your digital life in 7 easy steps](#)

### What if Telco companies protected users data and privacy?

Demand for security will grow in both consumer and business space. Hacks are becoming more prevalent and found out too late (1). With telecommunication companies becoming the main way that users across the world share and send data, encryption can become an advantage.

Public wifi, phones (2), and IoT networks (3) are gaining a reputation in their lack of security and ability to be hacked. **New networks and devices with a multitude of end-points offer more methods for hackers to exploit systems. This ensures privacy and security will continue to be a growing concern, and thus growing market.**

Customers want to know that companies that transmit their data and communications do so in a trustworthy way and work to protect their privacy. Better yet, customers can rely on first-party services and brand reputation from these companies to store, protect, and manage their sensitive information. **Telco companies have an ability to disrupt the market and define a competitive advantage through data protection and personal privacy.**

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### Examples

*Telegram / OnePassword / Signal*

### Can companies see privacy and security as a competitive advantage and not a threat?

Telco companies have created a space where watching user data has provided a competitive edge. In some countries, the ability to up-sell a customer based on deep packet inspection (DPI) or selling user data to other companies has become a more common practice. In others, privacy remains tight, but under attack (4).

In 2016, Apple defended its right, and customers rights, to privacy by not building in a back-door to iPhones. This would have allowed the US Government and FBI to gain access to phones they deemed a threat. This stance could prove to be valuable, and competitive, as Android has experienced more hacks.

These protective trends are not a threat, but a consumable service and competitive advantage. An underserved market waiting for a disruptor. Reversing the current trends of DPI (in countries where it is legal), telcos can gain trust and traction by being on the side of the customer and protecting them. Offering services such as VPN and encrypted data back-up, customers can begin to embrace companies who have thus far harvested and exploited their data.

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### Examples

*Amazon Go / ‘Uberization’ / Coop ‘Supermarket of the Future’ / Carrefour “Philips indoor positioning technology”*

## 3. Sell services, not data

The growth and selection of connected devices has continued to explode. These may monitor utility usage like water and electricity. They may make your home, office, or city smarter. They may even facilitate family safety, such as tracking your child, pet, and home belongings.

As millions of devices are introduced, one clear emerging trend is companies are not thinking about the broader customer journey, or about a customer engaging with multiple devices during their day. Companies think about their individual product and need. As a result, each one of these niche products don't fit into a larger system that can nestle itself into users daily lives (2).

Telco companies often resell many of these items from fitness wearables, to trackers, to smart home and office equipment. They are already at the center of home and personal connectivity. As a next step, they must look at how to partner with these companies and offer full services, being the aggregation engine that ties the individual pieces together into a viable service for users.

“Three hundred and fifty Dollars. That’s how much it costs telecom companies, on average, to acquire a new customer”

- [Can CMOs and CIOs Save Telecom?](#)

### What if telcos become the service platform for true smart home solutions?

The current telco landscape has many providers offering smart home devices. These devices are subject to four key flaws. First, the hardware is expensive for niche products. Second, there is a lack of business service models for recurring revenue. Third, the technology used, often doesn't work together from different protocols (1), and fourth, there is a high hardware turnover rate due to being obsolete.

These four areas can all be solved by service providers. Telcos are uniquely positioned to offer a deferred payment on hardware, including it in monthly costs. They can create a UI layer that offers compelling and simple integrated services between devices, and a billing platform for payment. As the primary provider of users routers / modems, SP's can augment these to solve the issue of multiple technologies. Lastly, telcos can replace old hardware as part of a customers contract.

This model is akin to the old cable TV model of bundling channels to offer broader distribution and stronger value. Service providers can usher in the smart home as a service and build new areas of revenue.

#### Examples

*AT&T Smart Home / IFTTT*

### Can service providers make a shift from providing data to providing connected living solutions?

Over the last decade and beyond, telco companies have laid the infrastructure to support data transfer and cell service across the world. They did this to charge customers a fee based on data and communication usage. However as customers have increased data usage and smart phone subscribers have reached a growth plateau, the price of data has fallen as companies race to have a competitive advantage.

The result may be the death of data as a core margin driver in telecommunication companies. The continued reliance on data will only move towards a utility / commodity company. Even as companies are stripping costs from retail and online, replacing humans with bots and automated systems, the change is not keeping up with the need to drive increased revenue and keep up margins on individual subscribers. Disruptive strategies for finding non and underserved markets will be critical, and using existing customer data to tap into those market segments will provide invaluable (3).

Telecommunications companies need to look at how they move into providing services to users that go beyond pure data needs.

#### Examples

*Amazon Go / 'Uberization' / Coop 'Supermarket of the Future' / Carrefour "Philips indoor positioning technology"*

# 3. Sell services, not data



“This time, however, the rise of online outlets like Netflix, Amazon Prime and YouTube and the shift of younger customers from traditional media have pressured media companies to seek out consolidation partners.”

- [AT&T agrees to buy Time Warner for \\$85.4 billion](#)

## What if telco companies were the default billing platform for individuals and companies?

Over the last decade telco companies have offered additional services and software (ex: email, cloud storage), specifically to small and medium sized businesses that expand upon the core offerings of data and connectivity. These additional services have rarely caught on, and even more rarely been enjoyed by customers who use them.

At the same time, traditional boxed or one-time-purchase software companies are moving further into service models with monthly or yearly billing. These often have individual billing platforms that require customer attention and management.

Instead of looking to resell lower quality software products, **telco companies would have more use in becoming a billing and payments platform for third party companies to leverage through partnerships.** Telcos have addressed a single bill for such services as TV, internet, phone, and mobile - this can be extended and utilized in a much broader set of services as a value offering to subscribers.

### Examples

*PayPal / MasterCard / Facebook*

## What if my mobile phone was the way I payed?

This isn't new to anyone in the telco space but it is still an underutilized service, especially in developing markets. While the EU, US, and core developed countries have high usage of bank accounts and credit cards, developing markets offer an underserved market for safe and secure payments and monetary transactions.

With the exception of WeChat in China and the vision of Apple Pay in the US, phones have still lacked a stickiness to become a default way customers pay and transfer money, however the latter is becoming more served by mobile banking.

While the difficulties often lay in engaging a strong partner network, small countries with underserved markets or larger countries with companies who can leverage existing partner networks are ripe to continue the trend of WeChat in China.

While developed countries would struggle in this area, **we advise telcos with the ability to develop a strong partner network and developing areas (India, Middle East, Africa, South East Asia) to invest exploration into this area.**

### Examples

*WeChat / Garmeen / Apple Pay / ING payment transfers*

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## 4. Exclusive Content

OTT (Over The Top) content will continue to push the bounds of data usage and connectivity speeds. Services like video streaming, video chat, virtual reality, and augmented reality are increasingly expected to work on mobile devices without draining a months worth of data in a day. Telco companies are now offering 20Gb plans in place of 2G data plans they had only a couple years ago.

Content, not communication, is now the main utilizer of this data. Although VR and AR could see the shift return to communication becoming the main usage of data in the next 5 years.

The phone and telco market is approaching, or at, saturation. Across nations and demographics, adoption of smart phones is ubiquitous. Customer costs are being driven down as competition aims to steal subscribers rather than find new ones. Providers will need to continue to compete on additional content rather than pure communication and data plans.

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Both strategies have been hit with questions on whether the hulking telecom companies possess the **nimbleness needed to navigate** rapidly shifting video-consumption habits.

- [AT&T and Verizon plot different strategies to develop video business](#)

### What if telecommunications companies owned their own content?

AT&T has leveraged their size to make massive content acquisitions (1), such as Direct TV and the impending Time Warner merger. This gives them a strategy to not only offer certain content for lower prices or zero rating (2), but it also allows the to offer content across multiple distribution channels, leveraging their own network.

Most telco companies do not have deep pockets, and therefore purchasing content is out of scope. Content creation is not often in the wheel house of companies adept at setting up communications infrastructure. Therefore, while initially appealing, we don't believe in this future of mergers and acquisitions for companies across the globe.

Rather, partnerships with media companies that allow telcos the ability to sell more data and offer promotional packages around certain content (zero rating, exclusive licensing) would be a better way to leverage assets. However this type of activity is subject to Government regulation and net neutrality laws (3).

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### Examples

*Spotify / Netflix / YouTube*

### How can companies sell data usage before it disappears?

As telco companies race to the bottom on pricing their data plans, eventually leveling out at unlimited data - or "unlimited data before throttling" - there are still several more years where selling data will be a major source of revenue and margin for companies.

Companies should quickly focus on strategies that leverage selling data. Multiple companies already partner with larger streaming services such as YouTube, Netflix, and Spotify to leverage data sales and offer a competitive advantage. Leveraging more partnerships with companies like this, and offering competitive pricing on usage will continue to draw customers in. Investment in better infrastructure and 4G support will allow users to leverage high data rates from everywhere.

As the last years of selling data often relied on roaming charges for a boost. As that is going away, these partnerships and promotional offering of heavy data bandwidth usage may be a last bastions of revenue and hope.

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### Examples

*Amazon Go / 'Uberization' / Coop 'Supermarket of the Future' / Carrefour "Philips indoor positioning technology"*

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# Key takeaways

## Digital Customer Service

1. Invest in digital technologies that remove the need for staff, such as bill payment, or purchases. Draw back investments on in-store analytics, iBeacons, and facial recognition
2. Experiment with existing technologies such as QR codes to exchange information between customers and store systems for faster processing
3. Invest in bots to simple recurring tasks that don't need a high-touch customer engagement

## Security & Encryption as a service

1. Leverage digital trust (security and privacy) as a competitive advantage
2. Offer security, VPN, and encryption as services
3. Invest in platforms for billing and payments

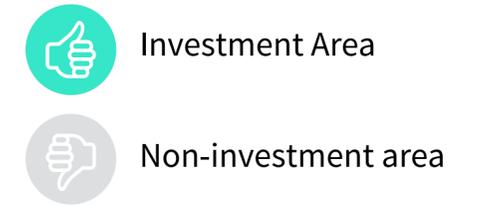
## Services, not data

1. Invest and explore in connecting devices to form value added services in the Smart Home and Smart Office space
2. Experiment and invest into understanding what strategic assets can become services
3. Be willing to abandon data and roaming as massive sources of revenue and experiment with other revenue models

## Content Exclusivity

1. Experiment with offering different digital services at reduced or zero rating
2. Partnerships may yield better results than purchases
3. Be aware of erosion of net neutrality and potential brand damage from negative user awareness

# Technology & strategic areas discussed



## iBEACON

Simple to install beacons which grab the attention of passing devices. iBeacons let us design customer / retailer relations in context.



## CROWDSOURCING

Crowdsourcing customer service means facilitating a community of users and empowering them to support each other and inform the business strategy.



## VIDEO CHAT (STREAMING)

As video chat and data heavy other content becomes more abundant, telecoms networks must meet the rise in data usage. 5G, LTE, Broadband and fibre.



## FACIAL RECOGNITION

Facial and emotional recognition offers a new tool to design for human emotional states. Many of the frustrating interactions we experience today can be lessened when our phones appear to be in sync with our emotional state, and recognize us.



## BOTS

Bots are a friendly, easy way to interact for most users. Whether they are topping up or have a billing question most of these common concerns can be addressed by bot.



## HIGH TECH RETAIL

The retail space is transforming. Amazon go is a store that identifies customers when they enter and exit the store and charges them automatically for whatever they carry away with them.



## VR FOR SHOPPING

Brick and mortar retail spaces can be replaced with fascinating new virtual experiences.



## VISUAL IVR

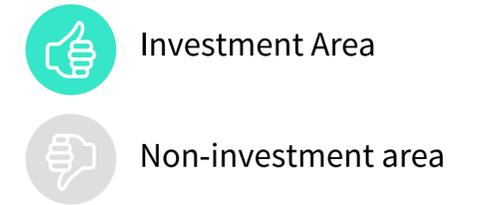
Customer service representatives will always be the baseline of customer service. Visual IVR offers a much improved user experience for connecting customers to the right representatives.



## ENCRYPTION

Demand for security will grow in both consumer and business space. Consumers will demand their usage is secure and businesses will look for holistic encryption networks.

# Technology & strategic areas discussed



## SMART HOME SOLUTIONS

Merging the product, data, billing and strategic capacities to provides users with Smart Home solution that fit their lives and activities.



## SECURITY AS A SERVICE

Leveraging the control and flow of data, utilization of security and privacy as a competitive component.



## ZERO RATED CONTENT

Controversial with net neutrality, the ability to competitively offer certain user desired services for free.



## CO-BROWSING

Co-browsing is a personalized way of helping customers use the services available online.



## OTT

Over The Top content is pushing the boundaries of data usage. Mobile apps continue to explore VR, AR and streaming capabilities.



## BILLING PLATFORM

As services become more ubiquitous and companies switch to monthly or yearly billing service models, billing platforms will assist in aggregating these services to a common and simple bill.



## PURCHASE / LISCENE CONTENT

The ability for service provider and telecommunication companies to purchase content and act as an exclusive distribution channel (while licensing to other channels).

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