



Research brief – August 2018

# Oops, I texted again

Communication behaviour in Germany

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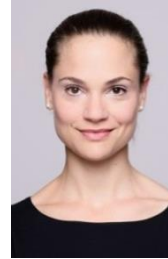


# Imprint

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# Foreword



## More functions, more competition

It's obvious, texting is popular. The findings of the third study on communication behaviour in Germany by WIK and the Fresenius University of Applied Sciences support this. The times when texting was about pushing brevity and language to their limits to express as much as possible in 160 characters is over. Today, we exchange pictures, videos and voice messages – making communication on mobile devices richer than ever before. This diversity of functions and richness of communication plays an important role in the success of applications such as WhatsApp, Facebook Messenger or Snapchat.

Even the first emails with attachments and previously popular applications such as AOL Instant Messenger (AIM), ICQ or Yahoo! Messenger bear witness to the importance of richness in interpersonal communication. Surprisingly, the regulatory definition of electronic communications services (ECS) has not kept up with this obvious fact. It is only now that the European Commission proposes to significantly expand the definition of ECS in their Electronic Communications Code. And so, rules that currently apply only to telephony and SMS may also apply to WhatsApp and similar applications in the future.

As an example of this sort of rule, let's look at interoperability. Would a consumer benefit from interoperability? The results presented in this study point to interoperability for WhatsApp and similar applications going against consumer preferences. In fact, consumers do not want their various contacts, circles of friends or chats to mix across different applications. If necessary, the vast majority of consumers can be contacted via conventional telecommunications services anyway. Indeed, the group of consumers who exclusively communicate via over-the-top (OTT) services is still very small. In addition, applying this sort of rule would hamper the significant innovative momentum of WhatsApp and Co.

Shopping, ordering taxis or pizza and playing games are already offered by many of these applications. WeChat, from China, and KakaoTalk, from South Korea, are the most innovative among them. Other providers are usually quick to catch up when a certain function resonates well with consumers. This creates competition that benefits consumers in the end.

Dr Iris Henseler-Unger

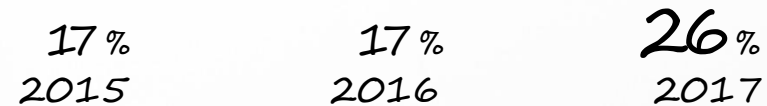
Share of messages sent via OTT services



Share of calls abroad via OTT services



Share of calls in Germany via OTT services



# Introduction

A large proportion of today's consumer communication in Germany takes place via internet-based services.<sup>1</sup> As early as 2015, more than half of all messages were sent via WhatsApp, Facebook Messenger, Instagram, Snapchat, Threema, Signal and many other OTT services, and about one-fifth of all calls were made through these services as well. While the importance of OTT services changed only slightly in 2016, in 2017 there was a sharp increase in their importance for communication in Germany. About three-quarters of all news and one-quarter of all calls were attributable to WhatsApp and Co.

What are the reasons for this increase? And why are OTT services so successful? Are SMS and phone calls a thing of the past? This study sets out to answer these questions.

We conducted a representative survey of 2,036 consumers in Germany. In order to be able to interpret these results better, we also use findings from interviews as well as research papers already published by us.

<sup>1</sup> The terminology used to describe internet-based communications services varies. The European Commission speaks of non-number-based interpersonal communications services. WIK has coined the term "Rich Interaction Applications (RIAs)". However, these services are often also referred to as over-the-top (OTT) (communications) services or mobile messenger applications (MMAs) or instant messengers (IM). Notably, in practice, some of these definitions are fluid, making them difficult to reliably identify. Common to all definitions, however, is that the communication functions form the core of the functionality of the listed applications, which are offered over the open internet and are typically freely available to everyone. Since the underlying objective of this study is to deal with the fundamental patterns of changes in communication behaviour in Germany, the terms internet-based (communications) services, OTT services and RIAs are used interchangeably here. A detailed discussion of the definition can be found in Arnold, René & Serpil Tas (forthcoming). Auswirkungen von OTT-1-Diensten auf das Kommunikationsverhalten – Eine nachfrageseitige Betrachtung (Impact of OTT-1 Services on Communication Behaviour - A Demand-Side Perspective). WIK Diskussionsbeitrag.

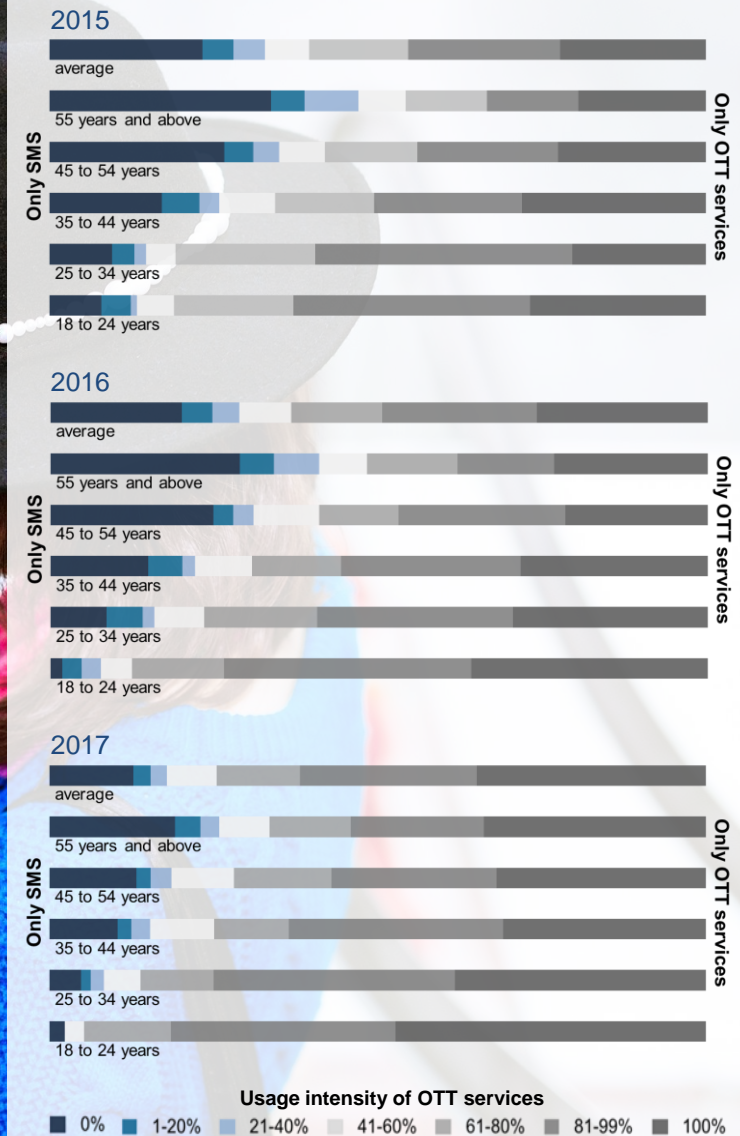


# What's up with texting?

WhatsApp, Facebook Messenger, Threema and other mobile messenger applications have taken over the smartphones of the Germans consumers. More than a third of the respondents say they exclusively use OTT services for texting. This proportion of the population has increased by more than 10% since 2015.

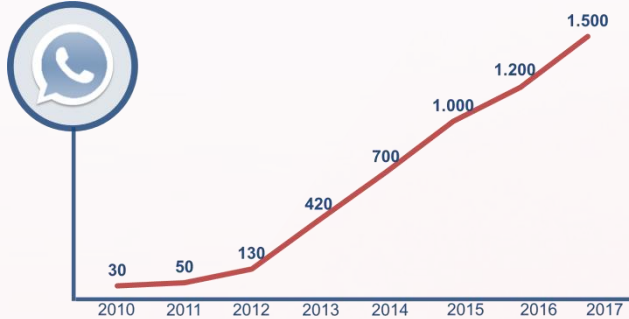
And it is not just a thing with the younger consumers. More than half of those aged 55 and older say they send at least 80% of all messages via OTT services.

At the same time, the group of traditionalists who rely exclusively on SMS messages continued to shrink in 2017. On average, in 2017, only around 13% belonged to this group of traditionalists. Among the 18 to 24-year-olds, this share was just 2%, the same as in 2016.

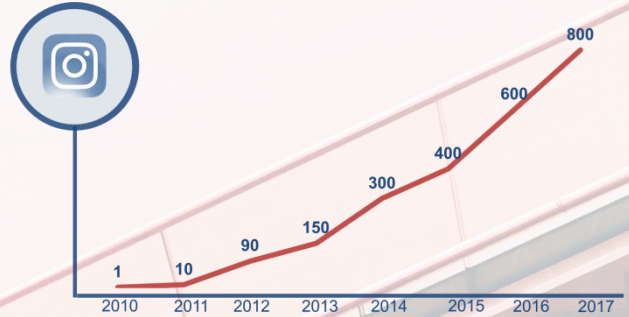


F-1: SMS vs. OTT services

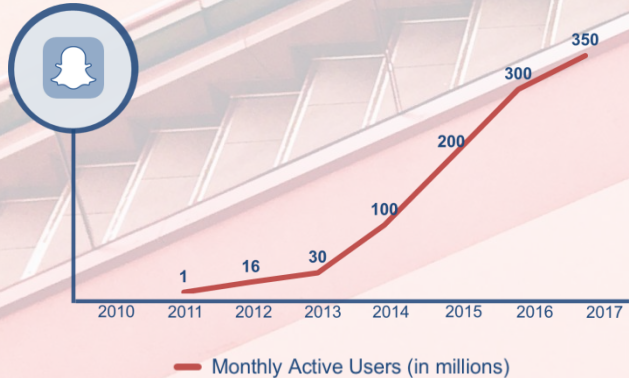
## WhatsApp



## Instagram



## Snapchat



F-2: Monthly active users worldwide from 2010 to 2017

## Stairway to success

Mobile messenger applications enjoy great popularity worldwide. WhatsApp has been growing at a nearly linear rate since 2012, registering around 1.5 billion users worldwide in 2017. Instagram, which also belongs to Facebook, has been able to gain users significantly faster since 2015 than in previous years. In comparison, Snapchat has to deal with a significant decline in growth recently.

Official figures for the number of users in Germany are not disclosed by any of the services listed here. Our survey data can shed some light on this.

F-3: Number of users of OTT services in Germany in millions

49.7

WhatsApp

7.5

Instagram

4.0

Snapchat

25.4

Facebook  
Messenger

4.0

iMessage

F-2: Press releases, Mashable (2013), Statista (2014), Business Insider (2014), AdWeek (2015), TNW (2016), Statista (2018).

F-3: Representative surveys in Germany (2017). Reference group: Population 18+.



# More functions, more success

F-4: Allocation of services to the functions in %

Text messages	97	Available as App	94
Profile picture	79	Picture messages	76
Group chat	73	Video messages	51
Voice messages	50	In-app calls	41
Encryption	41	Sticker	41
Profile page <sup>1</sup>	39	Location data	36
Browser application	36	Data attachments	33
Videochat	30	Geo chat <sup>3</sup>	23
Advertising	14	Video group chat	10
Calls to the PSTN <sup>2</sup>	9	Games	9
Audio group chat	9	Platform services	8
Event boards	5	Translation	5
Money transfer	4	Mobile payment	4
Local platform services	3	Statistics	3
Shopping	3	Screen sharing	2

1 Depending on the service differently named or implemented as "Channels" or "Timeline".

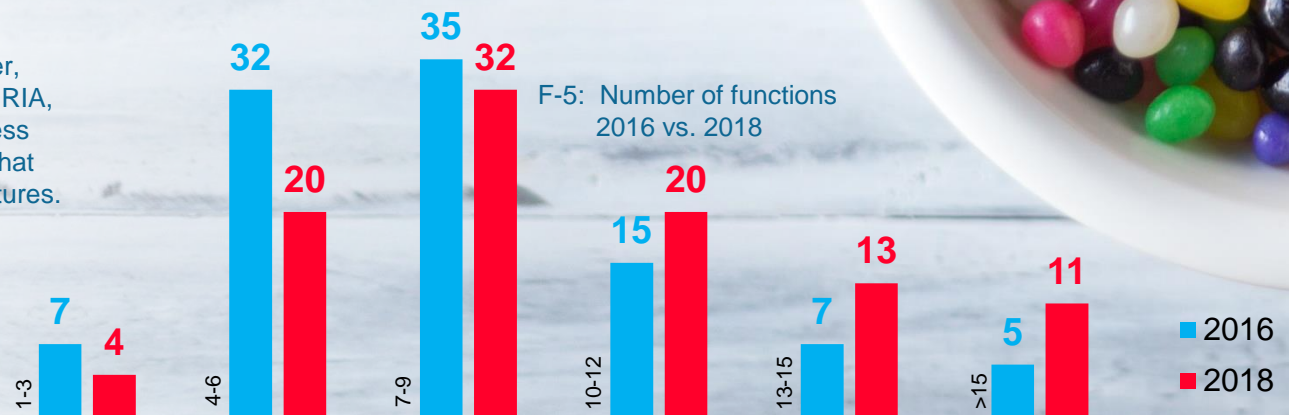
2 Calls to the number-based public telephone network; PSTN = Public Switched Telephone Network.

3 Notification about other users currently in the area and opportunity to contact them.

Our analysis of 217 popular mobile messenger applications indicates a wealth of functions they have on offer. In light of the number and variety of functions offered, we developed the concept of Rich Interaction Applications (RIAs). Their common feature is to enable rich interaction between consumers using a wide range of functions.

The table on the left shows how often the 30 major functions of the 217 RIAs occur in our dataset. Unsurprisingly, the most common feature is sending and receiving text messages. A total of 97% of all listed RIAs offer this function. Three-quarters of the listed services enable the sending of images. Over half of the applications can also send videos. About a quarter of RIAs identify contacts that are in the immediate vicinity and allow the user to directly contact these other users.

Particularly innovative features such as money transfer, dedicated partners offering additional services via the RIA, or even integrated payment functions are offered by less than 10% of the services listed here. Figure 5 shows that RIAs are continuously – and rapidly – adding new features. For example, the share of services offering 3 to 15 functions almost doubled from 2016 to 2018 (from 7% to 13%). By contrast, the proportion of RIAs offering fewer than ten functions has decreased significantly.





## The most popular functions of WhatsApp

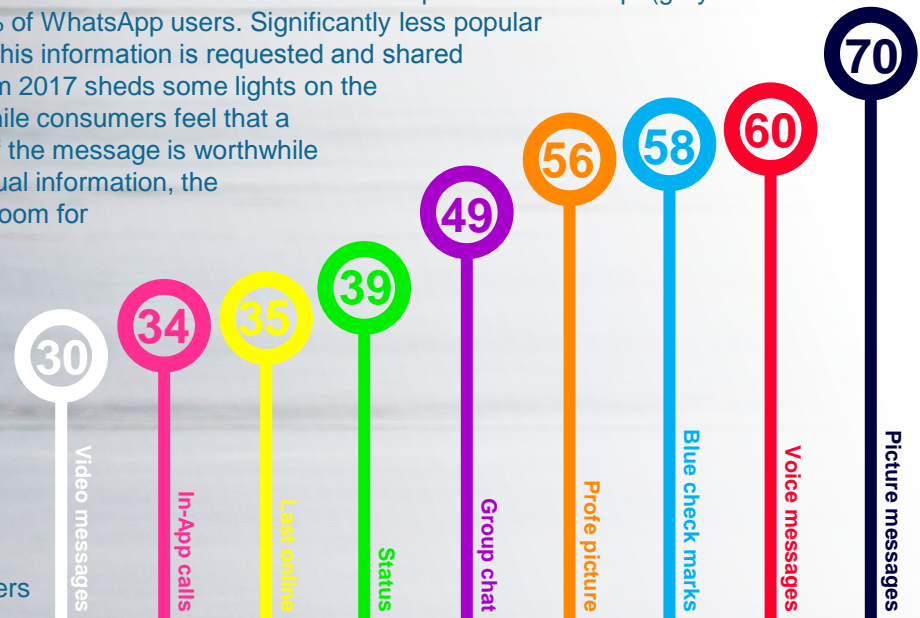
WhatsApp is the most popular RIA in Germany, offering its users a wide variety of functions. But which of these functions do consumers actually use?

17 out of 30  
functions  
available

Beyond plain text messages, 70% of WhatsApp users in Germany enrich their communication with picture messages. A little less frequently (60%), voice messages are sent. About half of the WhatsApp users used the group chat function within the last four weeks to communicate with several contacts at the same time. In-app calls and video messages are used by significantly fewer consumers; about one in three use these functions (34% and 30%, respectively).

While these functions enrich or simplify communication directly, awareness and notification functions, such as confirmations of successful reception of the message or information about whether the recipient has read the message, can provide a subtle additional layer to interpersonal communication. The time that elapses between receipt of a message and reading it, or between reading it and replying has developed into a finely tuned cultural code.

Unlike other RIAs, WhatsApp keeps its awareness and notification functions reciprocal. Only if both parties have switched them on, can both can see the information. This may explain the difference in the share of WhatsApp users who leave either of these functions switched on. Receipt and read receipt (grey and blue check marks) are used by 58% of WhatsApp users. Significantly less popular is the "last seen online" functions. This information is requested and shared by only 35% of users. Our study from 2017 sheds some lights on the motivation behind this behaviour. While consumers feel that a notification about successful receipt of the message is worthwhile to have and offers little beyond the factual information, the "last seen online" function leaves a lot of room for interpretation.



F-6: Percentage use of WhatsApp functions among German users

F-6: Representative surveys in Germany N=2,036 (2017). Reference group: WhatsApp users



# Multi-homing as standard

**3.4** Different OTT services are used on average by German consumers in parallel

As the trends presented here show, an increasing share of interpersonal communication is shifting to internet-based services. Unlike traditional telecommunications services, consumers can choose from a wide range of OTT services and are not limited to one service. According to the results of our survey, consumers in Germany enjoy this freedom. On average, every consumer uses 3.4 OTT services to communicate with others.

The smartphone owner on the right seems to use at least eight OTT services. According to our results, this is quite exceptional. Only about 5% use a similar number of OTT services in parallel. However, young consumers' usage patterns are significantly more varied (normally using around four OTT services in parallel) than those of consumers in the age group 55+ (around three in parallel).





# Not all contacts in one basket<sup>1</sup>

Humans are social beings. The need for interpersonal relationships is one of our most basic drives. The closeness of the social tie affects how we communicate with others and what we are willing to disclose about ourselves. Psychological research suggests that there is a correlation between the relationship stage and the use of specific communications channels. The results of our qualitative studies not only confirm this correlation, but show in detail the respective reasons and motives of the consumers. In the orientation stage of relationship development, consumers favour applications that allow for an idealised presentation of oneself:

*“Instagram is a simple experience, but not so personal... because you always think about what you're uploading, so you always look in a way that you look good or that you are photographed in a favourable way.”* (Emma, 19)

Applications such as Skype or FaceTime, on the other hand, are only used with very close social ties, as they allow a very authentic and genuine exchange with the other party:

*“I use it a lot with my boyfriend, when we can't see each other otherwise or with my mum. She gets a FaceTime call for her birthday if I can't be there in person. [...] It is simply much more personal.”* (Emma, 19)

The matching between applications and relationship stage appears to follow a finely tuned, implicit, cultural code. This finding also explains the phenomenon of “multi-homing” described on the previous page. Consumers proactively use technological seams between individual applications to allocate their contacts to specific social groups:

*“By choosing the application you can like decide whom to communicate with on which level.”* (Yannik, 23)

Faced with the idea that technological seams between MMAs could cease to exist, participants described feelings of being deprived of their privacy:

*“Wow. Totally blindsided. Because like everyone could reach out to me everywhere. The problem would be that you cannot [break] that you don't have any possibility for retreat. [break] because everyone could get in touch with me and I don't want that.”* (Luca, 20)



<sup>1</sup> For a full discussion of results as well as bibliographical references see Arnold, René, & Anna Schneider. 2017. "An App for Every Step – A psychological perspective on interoperability of Mobile Messenger Apps." 28th ITS European Conference of the International Telecommunications Society, Passau, 30th July - 2nd August 2017.



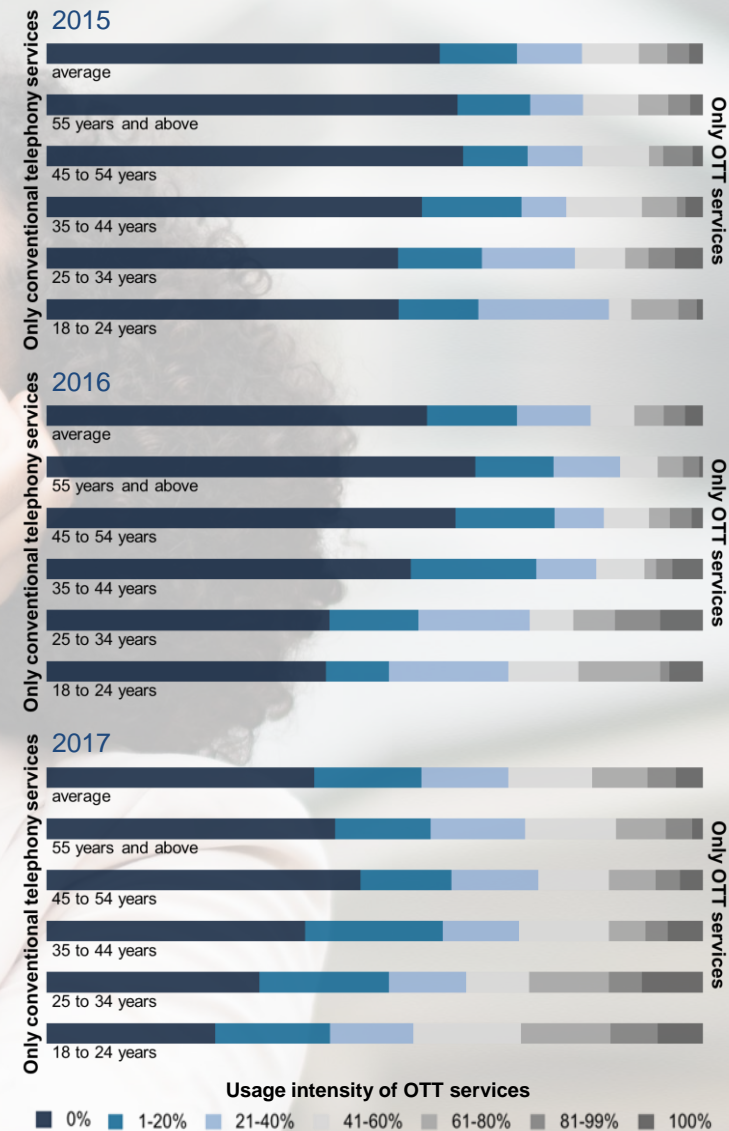
# No number, no worries

In 2017, OTT services were used much more frequently for calls within Germany than they were in 2016. While relatively little has changed in the share of pure OTT users, the proportion of traditionalists in all age groups has decreased significantly.

So, for the first time, the majority of consumers (55%) used both conventional telephony and OTT services to make calls within Germany. In 2016, 58% were using only conventional telephony services.

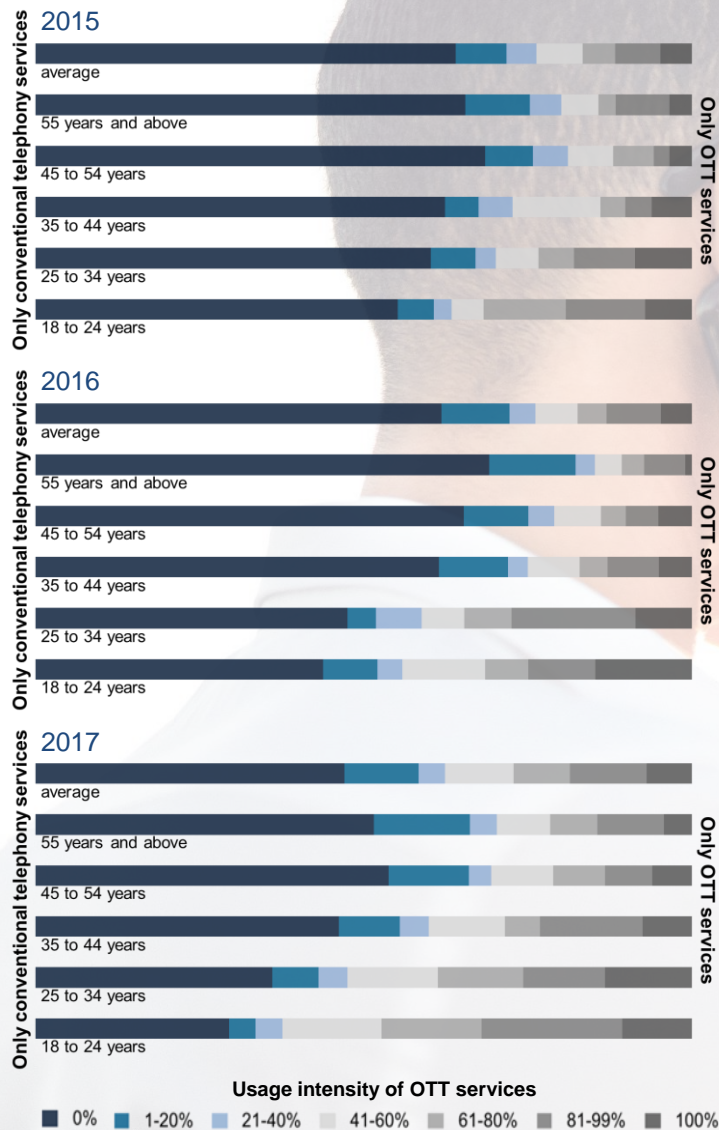
It turns out that acceptance of the calling function within applications like WhatsApp takes some time. WhatsApp introduced the in-app call feature as early as 2015 and Facebook Messenger was already able to make calls from user to user in 2014. Apple's FaceTime has even been around since 2010 and the Skype software was available even before the iPhone, in 2006, for mobile phones.

The more that consumers use WhatsApp and Co., the more likely they are to be willing to make calls within the familiar user environment. Still, only 34% of WhatsApp users say they use the in-app call feature.



F-7: Conventional voice telephony services vs. OTT services – calls in Germany





F-8: Conventional voice telephony services vs. OTT services – calls abroad

For calling abroad, OTT services were, in 2015, already playing a more significant role than for domestic calls. OTT services still offer favourable terms – especially for calls to non-European countries. In-app calls are completely free of charge.

Comparing the three survey waves, it is also obvious that once consumers become aware of the benefits of OTT services for international calls, they use them for the majority or all of their calls abroad. This trend continues in 2017 while the proportion of consumers who only use their mobile or fixed-line telephone for calls abroad decreases significantly.

While the proportion of traditionalists in 2015 hardly differed by age group, in 2016 and 2017 an age gap becomes apparent. Young consumers are increasingly relying on internet-based services.

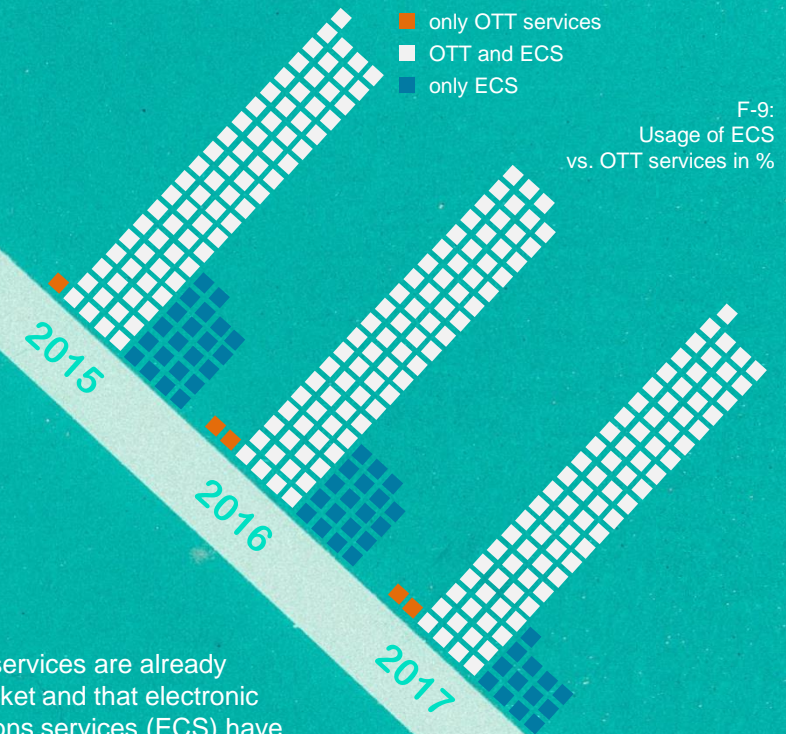


# Game, set and match for OTT?

It often seems that OTT services are already dominating today's market and that electronic telecommunications services (ECS) have become obsolete. The results of our surveys in the years 2015 to 2017 cannot support this impression.

OTT services are successful and facilitate a growing proportion of German consumers' interpersonal communication. The group of consumers who rely exclusively on OTT services for their communication remains insignificant over the last three years. However, the group that mix and match OTT and traditional services depending on the situation and contact has grown much larger.

In 2017, just 13% of Germans used only ECS, i.e. telephony and SMS.





# Conclusion

Although an increasing share of communication in Germany is happening on WhatsApp, Facebook Messenger or iMessage, almost all consumers in Germany continue to use traditional telecommunications services. If the trend of the past three years continues, this will not change in the foreseeable future. Likewise, our findings show that consumers are far from relying solely on one OTT application. Instead they choose between, on average, three and four such applications, which they use in parallel, depending on the situation and the person to be contacted.

Each communications service plays a very specific role in the communication behaviour of consumers. In our interviews, consumers reacted with concern when it was suggested that OTT services could be completely interoperable. Receiving a WhatsApp message from a freshly swiped Tinder contact – few consumers would like that.

In fact, consumers consciously choose the application as well as the functions they use within an application based on the strength of the social tie. Our results for the “blue checkmark” and “last online” on WhatsApp demonstrate this.

Android Messages from Google could have a significant impact on the trends observed so far. The service is now using the Rich Communications Services (RCS) profile, enabling Android users, whose network operators support RCS, to use a kind of extended SMS that offers many functions of modern OTT services across all Android end-devices. WhatsApp, in particular, could lose users through this launch, because essential functions can be used without the need for an additional login.





### ***About this study:***

The online survey for this study was conducted with three representative samples of 1,027 consumers between 30th November 2015 and 7th December 2015, 1,003 consumers between 30th November 2016 and 5th December 2016 and 2,036 consumers between 29th November and 5th December 2017 respectively by the international market research institute YouGov. The results were weighted to draw representative conclusions for the German population (age 18+).

### ***About WIK:***

Founded in 1982, WIK (Wissenschaftliches Institut für Infrastruktur und Kommunikationsdienste) in Bad Honnef, Germany offers consultancy for public and private clients around the world. Its focus is on the telecommunication, Internet, post and energy sectors giving advice on policy, regulatory and strategic issues.

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With more than 11,000 students, as well as numerous national and international locations, Fresenius University of Applied Sciences is one of the largest and most renowned private universities in Germany. Practical, innovative study and training content, focusing on the requirements of the labour market, with small study groups and well-known cooperation partners are just some of the many advantages of the Hochschule Fresenius. With its headquarters in Idstein near Wiesbaden, the Hochschule Fresenius can look back on almost 170 years of tradition.

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