Digitisation in Germany: Facts and Figures

Digital video transmission and viewing in Germany

October 2021

Dr. Simon Berghofer

Current findings of the representative survey on digital video transmission and viewing in Germany.

Like last year's Digitization Report, the 17th edition of the Digitization Report Video is overshadowed by the corona pandemic. The representative survey on TV transmission channels, household equipment with screens, and digital video viewing was again conducted under "pandemic conditions." However, the interference in everyday life by government measures to combat the pandemic was significantly more restrained this year than last year. The current findings and the trend analyses thus provide a good initial insight into which changes in the video markets and in video viewing were fuelled by the pandemic – and which trends are likely sustainable and will continue beyond the pandemic period. The first part of this article traditionally reports on developments at the level of reception channels and provides detailed information on the equipment of TV and screen devices in German households. The second part turns to the viewing of videos and reports on the latest developments in TV and video viewing via the Internet on the basis of users.

The complete research report on the study can be found here: https://www.die-medienanstalten.de/themen/forschung

Part I: Reception channels and equipment

Number of TV households stable at high level

Displays, whether small or large, are omnipresent these days. From smartphones and smart home assistants to own video projectors in the living room – the number of available screens in households has increased steadily in recent years. Despite this increasing abundance of screens, TV set are still "standard equipment" in every household. The number of TV households, i. e., households with at least one TV set, remains stable. Just over 95% of

households in Germany have at least one TV set. The total number of TV households is therefore 38.8 million and remains stable at a high level. The number of households without a TV set is slightly down compared to the previous year and has levelled off at 2 million after rising for several years.

Most TV households own a single TV set – this applies to a good 57% of TV households in Germany. More than four in ten households have 2 (29%) or 3 or more (14%) TV sets. Multiple set ownership has thus increased by 3% compared to the previous year. This brings the average number of TV sets per household to 1.6.

Distribution of TV reception channels stable, IPTV stagnant, DVB-T gains slightly

Cable and satellite remain the most important TV transmission paths. Slightly more than 16.9 million households in Germany receive their TV signal via the broadband cable network. The number of households with satellite reception is only slightly lower. Both transmission paths thus cover just under 44% of TV households in Germany, roughly the same level as in the previous year.

Terrestrial TV transmission increased slightly compared with the previous year. Slightly more than 2.6 million households receive their TV signal via DVB-T2 HD, which corresponds to a share of just under 7% of TV households (+0.4%).

At 3.9 million, the number of IPTV households declined slightly for the first time.[1] IPTV here refers to the transmission of the IPTV signal in "closed" networks, such as those operated by Telekom, 1&1, and also several regional providers. The providers guarantee certain quality standards through active capacity management and the use of proprietary receivers.

Tenfold increase in connected TV-only households in 4 years

In addition to traditional IPTV services, TV and platform providers have increasingly switched to distributing TV program signals over the open Internet in recent years. This is also referred to as "over-the-top distribution" (OTT). This makes it possible for

1 It should be noted here that, for the first time, the current survey no longer counts IPTV services from individual providers as IPTV households but adds them Connected TV-only households if no other reception channel is available. The reason for this is that these providers state that they no longer rely on closed networks for distribution.

Fig. 1

Five-year trend in household TV ownership

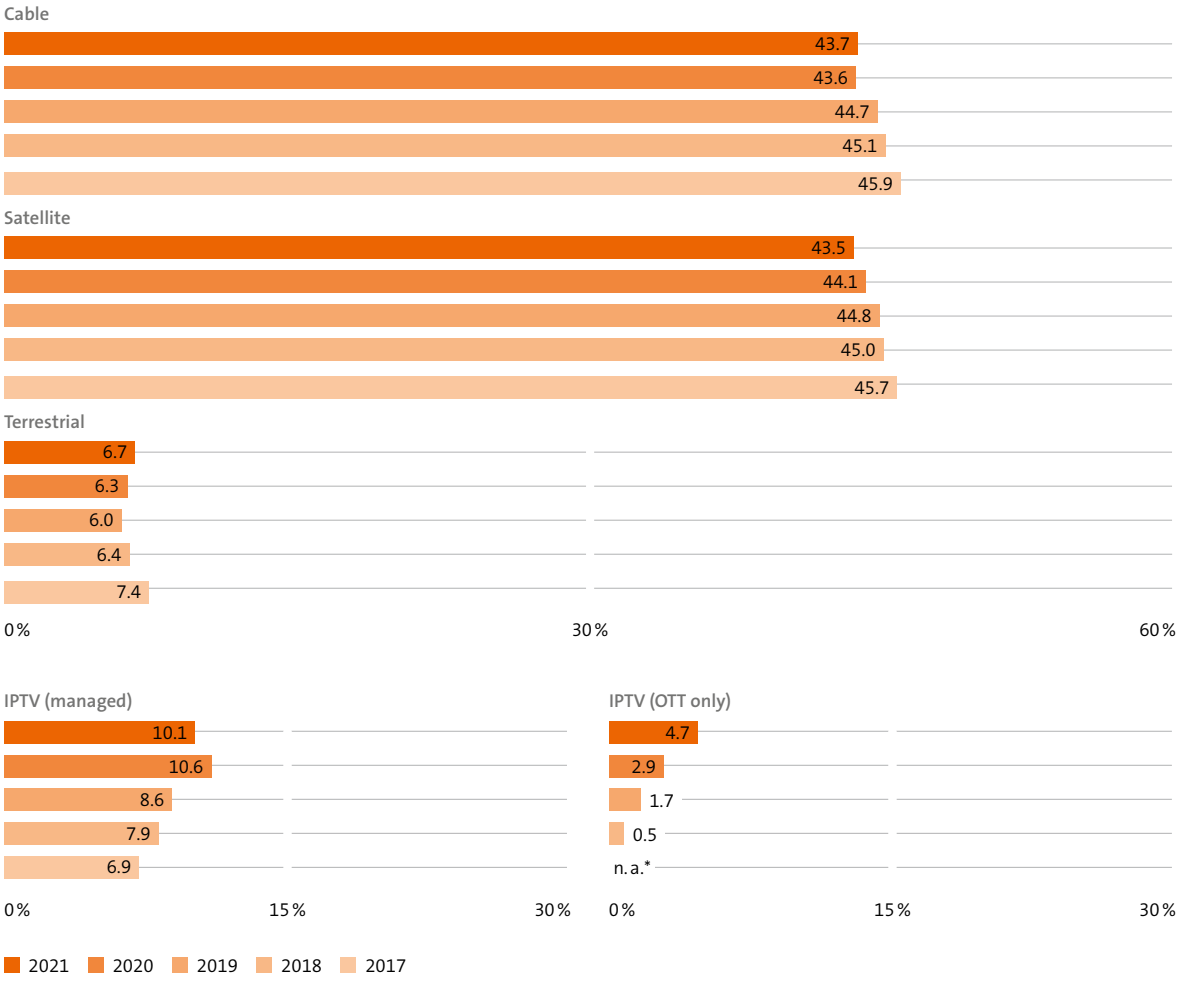
	2017	2018	2019	2020	2021
2+ TV sets	13.947	13.141	15.257	15.409	16.622
1 TV set	24.360	25.556	23.235	23.111	22.131
TV HH total	38.306	38.697	38.491	38.52	38.753

A total of **63.3 million** TV sets are in German households.

Figures in millions; Basis: 38.306 / 38.697 / 38.491 / 38.520 / 38.753 million TV households in Germany (n=7,059).

Fig. 2

Distribution of transmission paths in the five-year trend



*IPTV (OTT only) surveyed first in 2018; total > 100% due to multiple reception;
Basis: 38.306 / 38.697 / 38.491 / 38.520 / 38.753 million TV HH in Germany (n = 7.059).

users to dispense with traditional reception paths and obtain TV programming only via the Internet, a phenomenon also known as “cord-cutting.” The number of households that completely forgo traditional reception channels such as cable, satellite, terrestrial, or even IPTV in order to connect their TV exclusively to the Internet instead has risen to 1.8 million households. That is a good 700,000 more households than in the previous year. The number of TV cord-cutter households is still comparatively

low in relation to most other reception channels. However, their growth is impressive. Since they began being surveyed in the Digitization Report four years ago, their number has increased almost tenfold, from 0.5% in 2018 to 4.7% of all TV households in Germany.

Multiple HDTV sets on the rise

If you visit an electronics store today or order a new TV set over the Internet, you usually buy a TV with HD or very often with UHD resolution.[2] It is therefore hardly surprising that just under 85% of TV households in Germany have at least one high-definition TV set. Their number increased only slightly year-on-year to 32.7 million households (+0.6%), with a slightly stronger increase in multiple HD sets (+2%). Almost a third (29%) of TV households have 2 (21%) or 3 or more (8%) HDTVs. In a good 70% of TV households, all TV sets support a high-definition standard.

UHD devices now in almost every third TV household

Clearly on course for growth is the spread of ultra-high definition (UHD) TVs. This class of set, also known as "4K," with a resolution of 3,840×2,160 pixels, is now found in just under one in three TV households (30%). That is 5% more than in the previous year and corresponds to a total of 11.5 million households. Differentiated by transmission medium, all households are at a similar level; only the traditionally more technology-savvy IPTV households stand out with an above-average UHD TV equipment rate of 39% (see Fig. 3).

Still under 15 million SD-only sets in households

Despite increasing HD equipment, still just under 16% of households have TVs without HD reception. Translated to the number of TV sets, this corresponds to around 14.8 million TV sets that would have to be upgraded or possibly disposed of in the event of a future switch-off of SD transmission.

HD reception at a stable level

The Digitization Report distinguishes between household equipment with HDTV sets and actual HDTV reception. Since public TV channels are broadcast in unencrypted HD quality via all distribution channels, every household with HDTV reception equipment should also be able to receive high-definition TV programming. However, this is not always the case. Measured reception of HDTV is always slightly below the equipment rate. Reasons for this

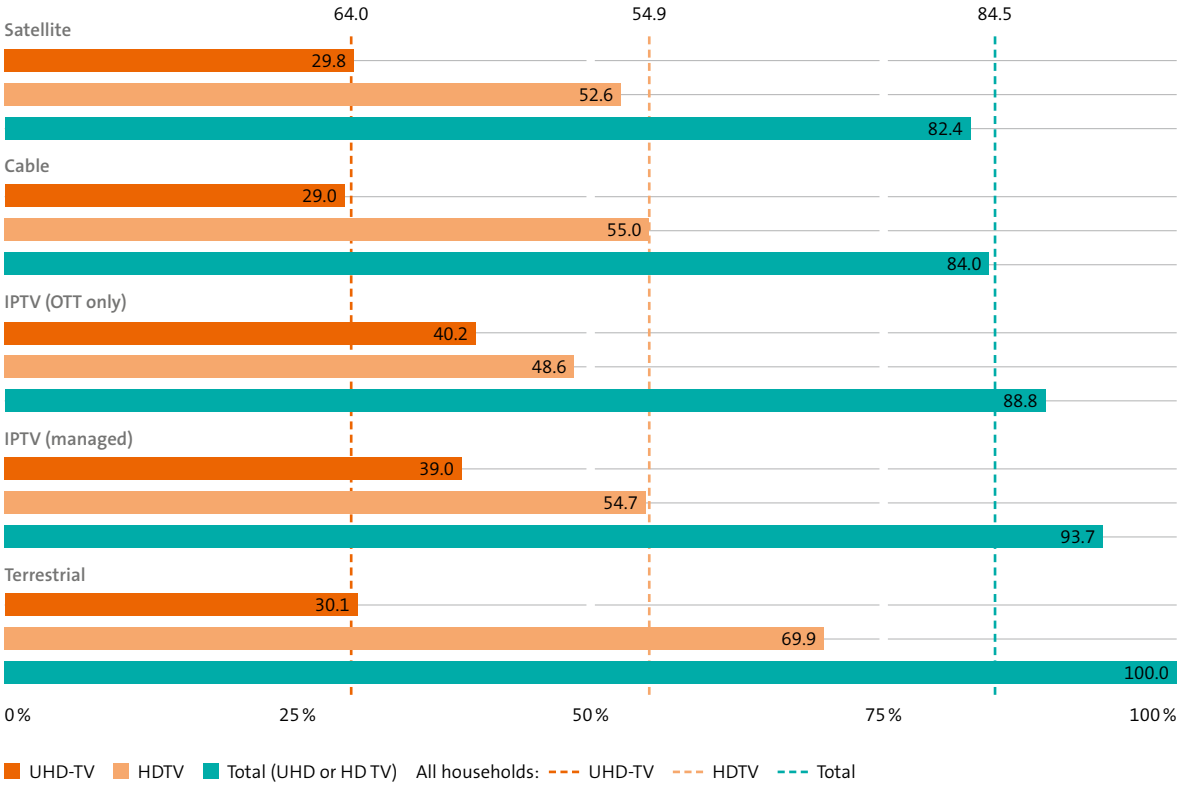
2 In the first quarter of 2021, the market share of UHD TVs was 75% of TV sets sold.

Determination of connected TV-only households.

In the Digitization Report, the number of cord-cutter TV households is determined in several stages. In a first step, the TV sets used are surveyed. Based on the individual devices, it is then asked (aided) via which transmission channel the TV program is consumed. Only if none of the four transmission paths mentioned (satellite, cable, DVB-T, or IPTV) is explicitly confirmed is there a question about the type of TV reception on the set. If it is then stated that the TV is connected exclusively to the Internet, the household is counted as an OTT-only household.

Fig. 3

Household equipment with HDTV/UHD devices by transmission channel



Basis: 38.753 million TV households in Germany (n = 7.059).

include that individual hardware components in the home video system are not HD-capable or that the signal strength / bandwidth at the feed or in the home distributor is insufficient. A lack of updates to the channel or favourites lists can also be a reason.

A good eight out of ten TV households (80%) with broadcast TV reception say they watch their TV programs in high-definition quality. This corresponds to just under 30 million households in Germany, which means that HD reception remains at a stable level. This stability is largely evident across all TV transmission paths. Compared to the previous year, only reception of high-definition TV via IPTV has increased slightly (+4%), while all other traditional transmission paths remained largely at the previous year's level.

Private in HD: steady annual growth

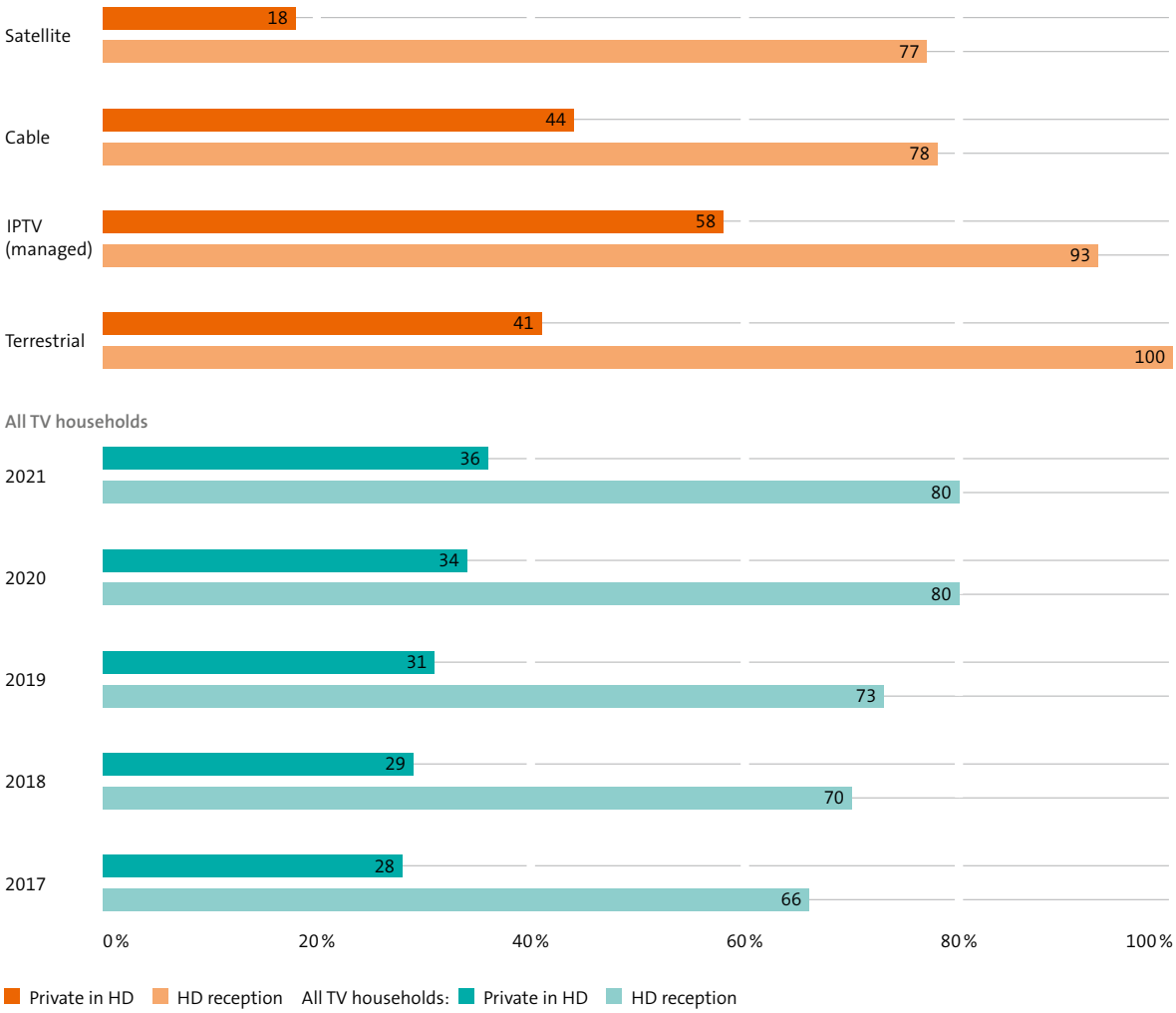
While public programs are offered in HD quality without additional charge, a paid HD program package is required to receive high-definition private

TV programs. Such packages can be ordered on all transmission paths.[3] Just under 13.3 million TV households have opted for such an HD package and can enjoy the entire range of programs in high-definition quality. This is around 2% more than in the previous year and corresponds to 36% of households with broadcast TV reception. The trend

3 The viewing of HD programming packages by Connected-TV-only households cannot be shown here for methodological reasons.

Fig. 4

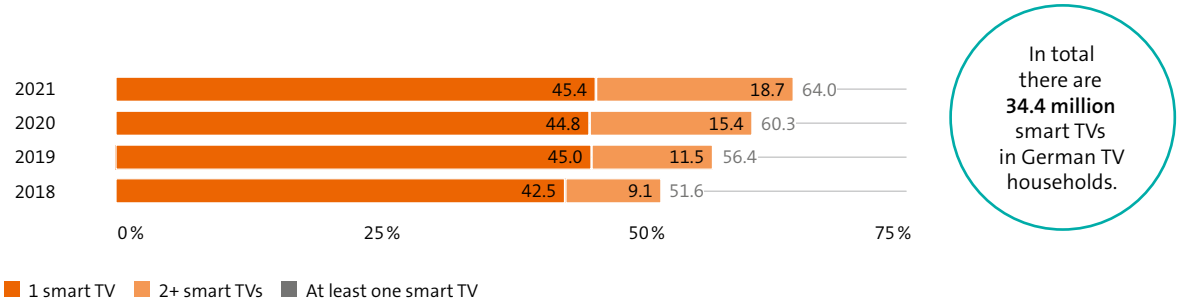
HD reception and private in HD



Basis: 36.915 million TV households with broadcast TV reception (n = 6,778); 16.933 million cable households (n = 2,988); 16.867 million SAT households (n = 3,097); 3.910 million IPTV households (n = 811); 2.615 million terrestrial households (n = 529).

Fig. 5

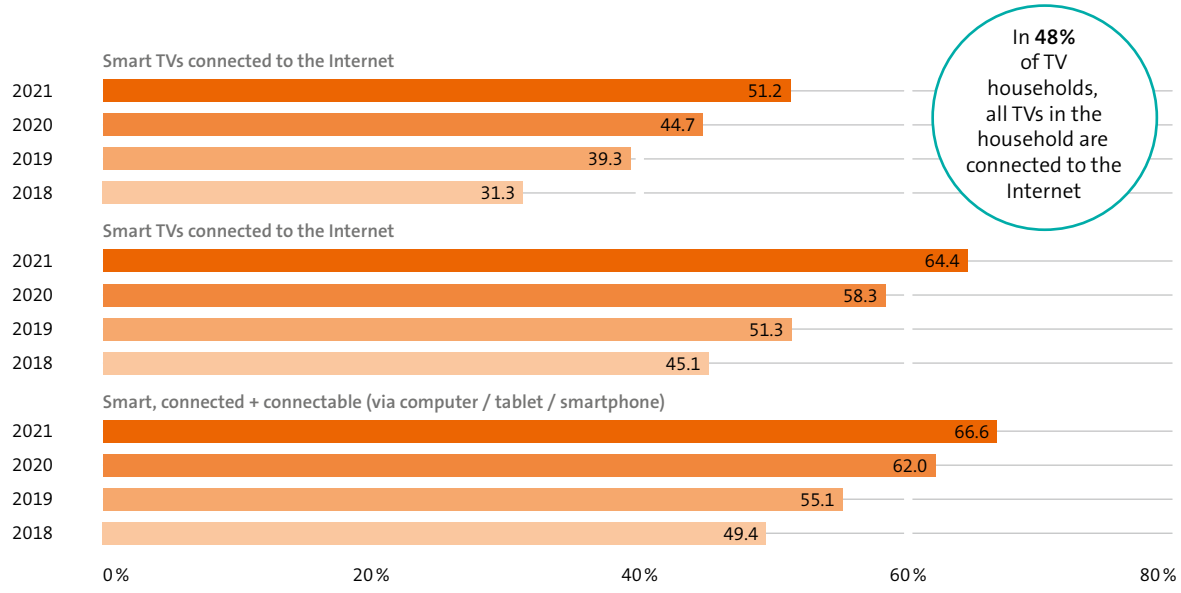
Household equipment smart TV



Basis: 38.697 / 38.491 / 38.520 / 38.753 million TV households in Germany (n = 7,059)

Fig. 6

Connected-TV



Basis: 38.697 / 38.491 / 38.520 / 38.753 million TV households in Germany (n = 7,059)

has shown stable growth for several years. Compared to 2017, the number of households with high-definition private TV reception increased by around 2.6 million. This represents a relative increase of 24% in 5 years.

Figure 4 shows the relative share of HD residential television reception by transmission mode. It is clear that, in relative terms, the share of households with HD private television reception is highest in IPTV households. In absolute terms, most private HD TV users receive their TV programming via cable (7.7 million), followed by satellite reception (3.6 million) and IPTV (2.4 million). Terrestrial reception supplies just under 1.4 million households with high-definition private television via DVB-T2.

At least one smart TV in almost two-thirds of all TV households

Most of the sets available on the market today are not only HDTV sets, but also smart TVs, i. e., TVs that can be connected to internet or home network. Just under 25 million households have at least one such Internet-enabled TV. That corresponds to two thirds (64%) of TV households in Germany. Smart TV equipment has thus increased again by almost 4% compared to the previous year, continuing the growth trend of recent years. Multiple units also continue to increase – slightly less than one in five households (19%) has 2 or more smart TVs. In just under 46% of TV households, all existing devices are "smart."

As expected, smart TV equipment is above average in the overall somewhat more tech-savvy IPTV and OTT households. More than three quarters (77%) of households that receive their TV signal via IP networks have at least one smart TV set. At 67%, DVB-T2 households are also slightly above average, while cable and satellite households each have a smart TV rate of just over 63% of households.

Eight out of ten smart TV households connect their set to the Internet

To use the full range of functions of a smart TV, the device must be connected to the Internet. However, this is not always the case. The Internet connection rate for smart TVs rose by 6% last year compared to the previous year, bringing it to 80% of households that own at least one smart TV. This means that a total of almost 20 million TV households can access additional programming such as HbbTV, media libraries, and apps on their smart TV. In terms of all TV households in Germany, this corresponds to just over half (51.2%).

Connected TV overall: In two out of three households, at least one TV is connected to the Internet.

Older TVs are also being made "smart" via other ways to use content and applications distributed via the Internet. Peripheral devices such as streaming sticks or set-top boxes are used (connected TV), or the TVs are connected to the Internet with the help of a computer or smartphone (connectable TV). If we consider all the ways of connecting the TV to the Internet, the number of households connecting their TV to the Internet rises to just under 26 million. This means that just over two thirds (67%) of TV households in Germany can access content from the Internet via their TV.

Part II: Digital video viewing

In the second year of the Covid 19 pandemic, the results, especially trend observations, must again be interpreted in light of the unusual situation. Although the going-out and contact restrictions were less severe in the 2021 survey period than in the previous year, one can still assume that the unusual circumstances continued to influence the information and media viewing of people in Germany. Consequently, it is important to keep the "Corona glasses" on when classifying the results on media and video use this year as well.

Access to broadcast television still very high

For a long time now, people have not just been watching TV from the comfort of their living room sofa, but on a variety of screens and in a wide range of situations. Nevertheless, access to a TV set remains standard in German households: more than nine out of ten (92%) people in Germany have access to a TV set with broadcast TV reception via cable, satellite, IPTV, or DVB-T2-HD. Differences are particularly evident between the age groups. Among people 50 and over, access to broadcast TV is well above the population average at more than 96%. The situation is different for younger people. More than one in ten of those under 50 has no access to a TV set with broadcast TV reception. Among 20- to 39-year-olds, the figure is as high as one in six. This does not mean that these people have said goodbye to TV programming, but only that they prefer other screen devices and use the Internet as a transmission channel.

Equipment with OTT-capable devices on a par with TV on average in the population

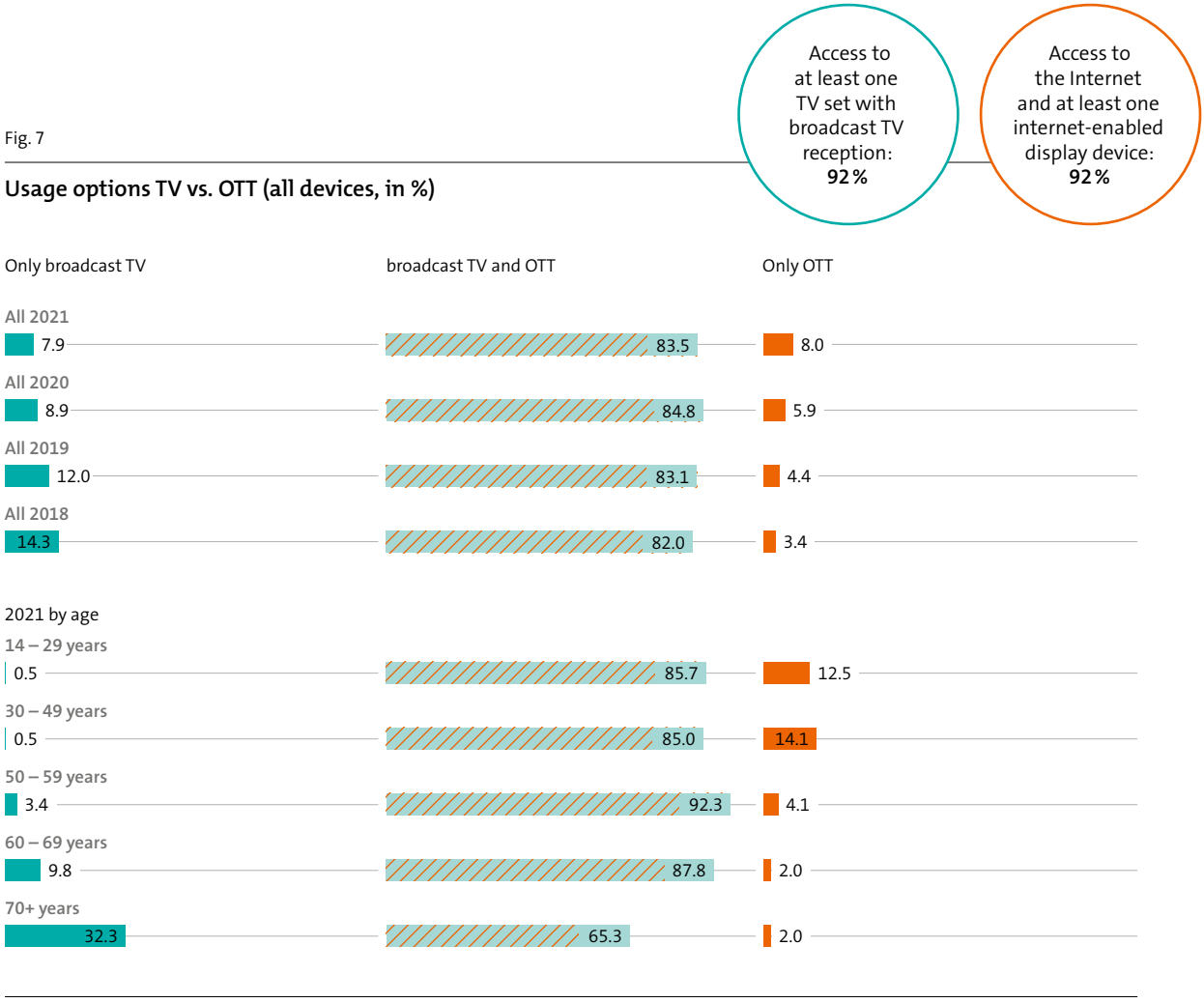
At 92%, device penetration with Internet-enabled screen devices reached the same level as broadcast TV for the first time this year. A breakdown by age group shows that virtually everyone under 60 has at least one Internet-enabled screen device. Even nine out of ten 60 to 69-year-olds still have access to a smartphone, tablet, or similar device. Penetration with OTT-enabled devices is somewhat lower only among people aged 70 and over. Slightly more than two in three (67%) of those over 70 have the necessary equipment to watch videos from the Internet.

Over-the-top video (OTT video)

OTT stands for over-the-top and refers to video content that is distributed using an Internet connection via the "open network" in the IP protocol. Unlike IPTV, for example, the content is independent of the infrastructure provider and can be received on any Internet-enabled screen device. Examples of OTT videos include live streams from TV broadcasters such as DAZN, the media libraries and platforms of public and private TV broadcasters (e.g., Joyn or TVNOW), and videos from video platforms and streaming services such as YouTube, Netflix, or Amazon.

Fig. 7

Usage options TV vs. OTT (all devices, in %)



Missing values for 100% = none of the above; Basis: 70.635 million people aged 14 and over in Germany (n = 7,507).

A large proportion of the population can watch broadcast TV and Internet videos

The high device penetration of both broadcast TVs and other Internet-capable screen devices holds enormous reception potential for video programming. More than eight out of ten (84%) people aged 14 and over in Germany have the technical capability to watch both broadcast TV and videos from the Internet. This proportion is largely stable in the trend. Figure 7 also shows that the number of those with exclusive access to OTT services has risen to just under 5.7 million people, while the number of those who "only" have access to broadcast TV has declined. This is not surprising in view of a still rising number of Internet-enabled screen devices in households. This development can also be partly explained by the rising proportion of connected-TV-only households, as described in Part 1 of this article.

Television still most important device for viewing videos

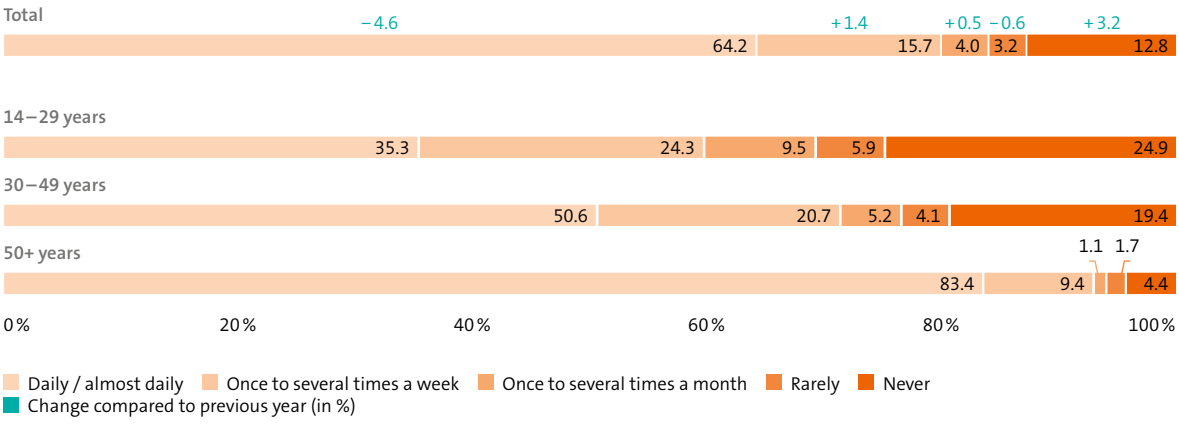
When asked about the most important device for watching videos, more than half (57%) of people aged 14 and over in Germany named the TV set. Behind TVs – at a considerable distance – come smartphones, named by 12%, followed by laptops (10%), PCs (8%), and tablets (5%). This means that the relevance of TVs returns to its pre-pandemic level after a slight increase last year. TVs continue to be cited as the most important device across all age groups. Those under and over 30 exhibit clear differences from the average population. In the younger age group, only one in three (33%) names the TV as the most important device for viewing video; other devices such as smartphones (23%) and laptops are considered most important by significantly more people. Among the over-30s, on the other hand, the number of those who prefer the TV set is above average and rises significantly as the age of the groups under consideration increases.

TV set: daily „broadcast" TV use back at pre-crisis level

After the number of people watching broadcast TV on a daily basis increased last year, contrary to the trend of previous years, the more intensive frequency of use is returning to the pre-pandemic level (see Fig. 8). The trend again shows a slight overall decline in regular viewing: a good 59 million people watch broadcast TV at least once a month, which corresponds to 84% of people aged 14 and over in Germany, 3% less than in the pre-crisis year 2019. This development is driven primarily by the younger age groups. One in four (25%) under 30-year-olds say they no longer use broadcast TV on their TV sets. In the 30–39 age group, this also applies to slightly more than one in five people (22%). Conversely, the frequency of use among the majority of older people is significantly above average. It is important to note that this means "broadcast" viewing of linear TV programming on the TV set. This does not take into account the widespread use

Fig. 8

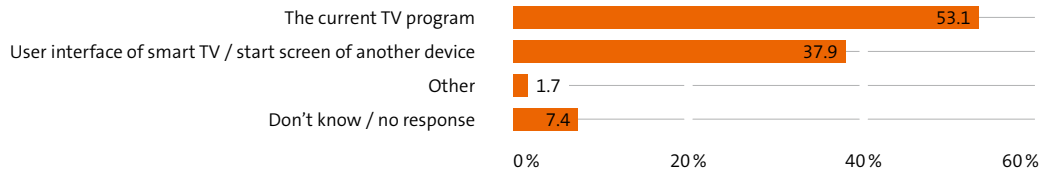
Frequency of use of broadcast TV (on TV set)



Basis: 70.635 million people aged 14 and over in Germany (n = 7,507).

Fig. 9

First screen after switching on the TV set (Connected TV users)



Basis: 41.620 million people aged 14 and older who use OTT on their TV set at least once a month (n = 4,789).

of OTT services from TV broadcasters, particularly among younger people, both on smart TVs and on other devices.

One in three has to navigate to the program on Connected TV

With the triumph of smart TVs and other Internet-enabled screen devices in German households, the importance of user interfaces for finding both video content from the Internet and linear TV programming has increased sharply. Regardless of the device on which video content from the Internet is viewed, access requires interaction with a user interface. Its design is consequently the decisive barrier a provider must pass in order to bring its content to viewers.

More than one in three (38%) OTT users with Connected TV do not immediately see the regular TV program after switching on their TV set, but are first faced with a user interface, e. g., of their smart TV or the home screen of another device. Users must therefore first interact with the user interface and thus chose from a multitude of options. This makes a decision necessary – do you click to the linear TV program or do you prefer an OTT offer – and if so: which one? The design of the user interface can have a significant influence on the user's decision and ease or hinder the findability of certain content.

User interfaces are mostly not adapted

Almost 25 million people regularly use OTT services on their smart TVs. Almost two out of three (64%) use the manufacturer-defined interface of their device for this purpose. However, more than half (57%) of them do not bother to customize the interface. Consequently, an offer must be prominently placed on the user interface of a smart TV and ideally also preinstalled in order to be easy to see. The associated discrimination potential for video services was also addressed by the legislature with the last amendment to the Interstate Media Treaty (see the text box on page 15).

Four out of ten people with connected smart TV notice advertising in the menu

User interfaces are not only relevant for finding programming. Rather, they also offer an attractive marketing space for commercial content and new monetization options for device manufacturers.

Here, the customer already interacts actively with the device, which can potentially favour attention for advertising content. When asked if they notice advertising on their TV's menu bar, four in ten (44.2%) people with one or more connected smart TVs say they at least rarely see product ads on their device's menu bar. One in three (33%) see it at least occasionally and one in seven (14%) see it frequently.

Use of voice control on the TV has so far been a marginal phenomenon

Many modern TVs offer navigation not only via a visual user interface, but also voice control. Experts believe that voice control of smart TVs will play an important role in the future, e. g., in controlling fitness videos or in the increasing integration of the TV into a smart home environment. Speech will thus be used to control the device, but will also play a role in easily navigating through the program and displaying content or recommendations. Anyone who has ever laboriously entered a search term using the buttons on their remote control can easily see the relief provided by speech input. From a media law perspective, voice control can also fall under the concept of user interface and thus under the corresponding regulation. To date, the use of voice control on TV sets has played only a secondary role for most people. Although just under a third (32%) of people with at least one smart TV connected to the Internet have already tried out the function, the number of occasional (11%) or regular users (6%) is currently still at a low level. Nevertheless, voice control has considerable potential for the future. In terms of accessibility to media content, the ease of access and transparency of user interfaces are also highly relevant in their auditory implementation.

All screen devices: broadcast television use predominates

When asked about the proportion of time spent watching broadcast TV, on-demand programs, live streaming, and self-recorded programs, the respondents still believe that broadcast TV use predominates, with an average of 51%. The average population spends a third (33%) of the video time budget on viewing VOD services, while livestreaming comes to 8% and the use of recorded shows to 7% of the available time budget.

Regulation of user interfaces

With the effectiveness of the State Media Treaty (MStV) in November 2020, providers of user interfaces that essentially serve for direct control of broadcasting, broadcast-like telemedia, and journalistic-editorial telemedia are subject to new rules. Such user interfaces must now be reported to the responsible state media authority. In addition, the Interstate Media Treaty formulates a series of requirements for the ease of access of content and services and obliges providers to be transparent, especially in the selection, aggregation, and presentation of content. The state media authorities are responsible for supervising compliance with the new rules.

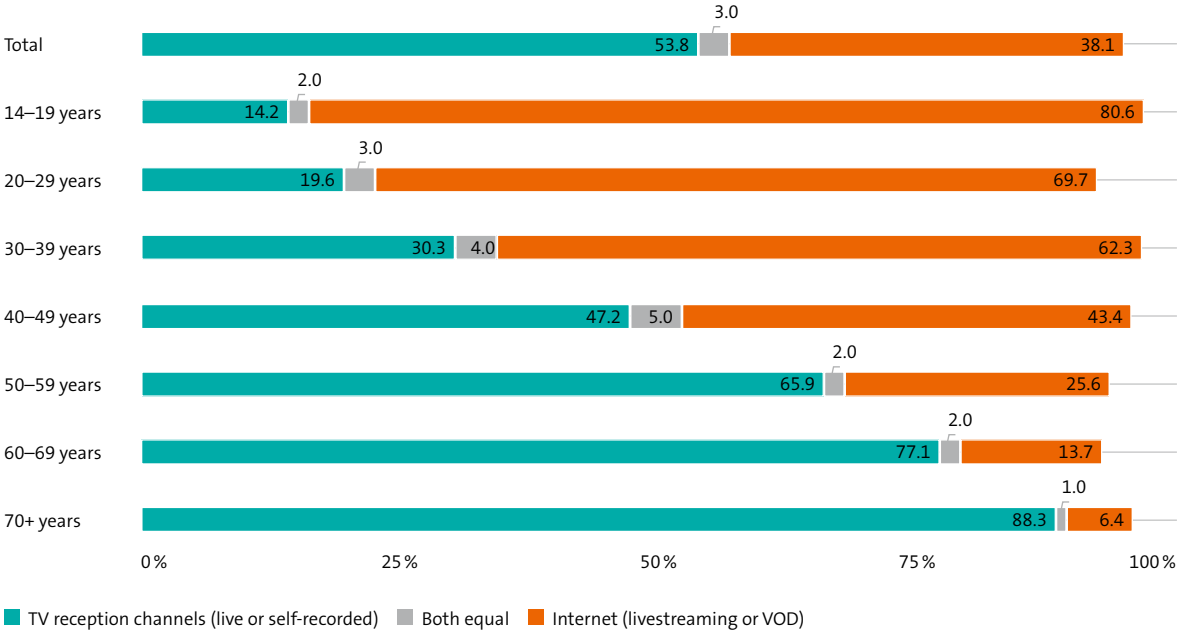
Trend toward non-linear OTT use continues

Over the five-year trend, the estimated proportionate viewing of VOD has increased by 15%, while broadcast TV viewing has lost 18% in the same period. Live stream usage also gained 3%. The figures show that, at least from the point of view of the respondents, there has been a clear shift in the viewing videos away from traditional linear TV programming to more location- and time-independent viewing via the Internet. However, this still says nothing about the content viewed – in fact, relevant parts of VOD viewing are not only attributable to the classic streaming providers, but also to the numerous online services of the broadcast TV.

There are clear differences in the assessment of the time budgets spent between the age groups. Whereas the youngest, aged 14 to 19, spend a good two-thirds (65%) of their video time on VOD, broadcast TV only accounts for just under one-fifth in the total time budget. VOD use also dominates in the other age groups under 40, accounting for more than half of video time, while broadcast TV viewing dominates among 40 to 49 year olds. The over-50s continue to spend significantly more time on broadcast TV viewing. However, the trend in all age groups under 70 shows a tendency towards more VOD use with a simultaneous decline in the time budget for broadcast TV. When comparing the age groups according to their primary viewing method, i. e., according to whether they spend more time

Fig. 10

Primary „source of supply“ of video content: TV reception channels vs. OTT (all devices)



Primary use = predominant share of use; Basis: 70.635 million people aged 14 and over in Germany (n = 7,507).

with content obtained via broadcast TV channels or with content obtained from the Internet, the age group gap becomes clear (see Fig. 10).

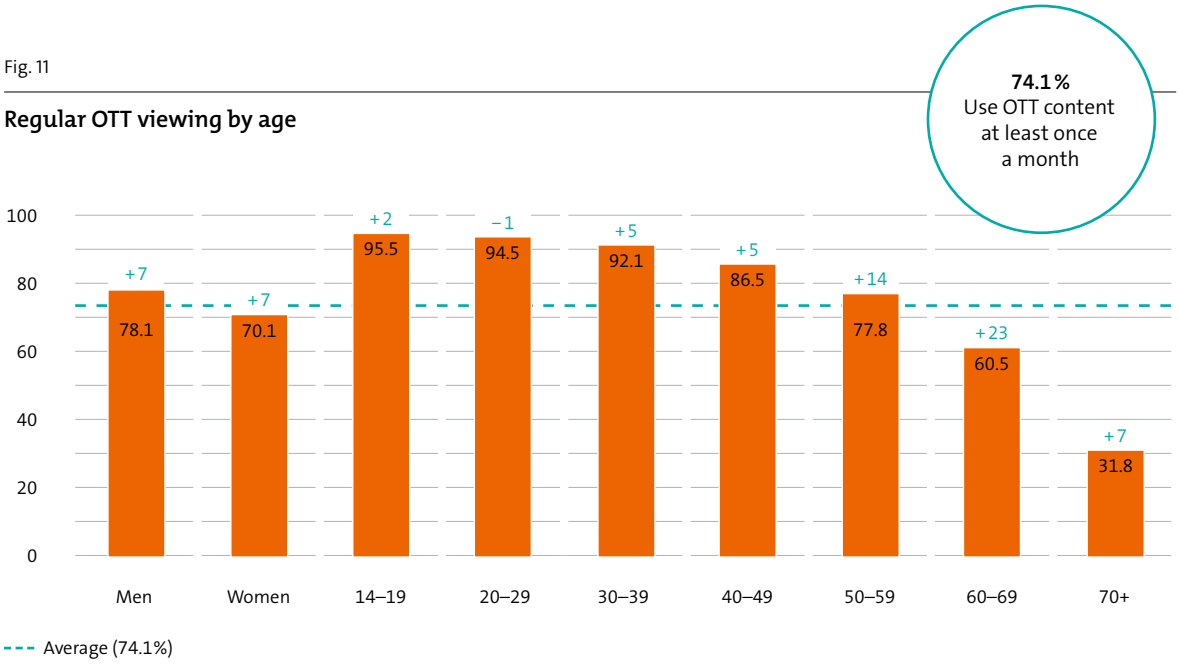
OTT use: Video viewing via the Internet continues to grow

Last year, partly due to the pandemic situation, there was strong growth in viewing video content both via broadcast TV and on the Internet.[4] While TV usage has dropped to pre-crisis levels (see above), video content from the Internet has continued to grow. Just under 55.2 million people in Germany viewed videos via the internet at least rarely. This is 3.7 million more than in the previous year and corresponds to more than three quarters (78%) of the population aged 14 and over. A good 52 million view video content from the Internet regularly, i. e. at least once a month (74%). More than two-thirds (68%) view it at least weekly, and slightly less than half (47%) view it daily or almost daily. Unsurprisingly, Internet video viewing is highest among younger people. Among those under 40, around nine out of ten already watch video over the Internet at least once a month. Figure 11 presents the regular viewing of video content from the internet by age comparison and as a trend. It shows: While a certain saturation is emerging among younger people at a very high level, it is primarily people in the middle and older age segments who are driving OTT usage.

4 See Digitization Report Video 2020 and https://www.agf.de/service/pressemitteilung/tv-bietet-ablenkung-vom-corona-alltag-115.

Fig. 11

Regular OTT viewing by age



Basis: 70.635 million people aged 14 and over in Germany (n = 7,507).

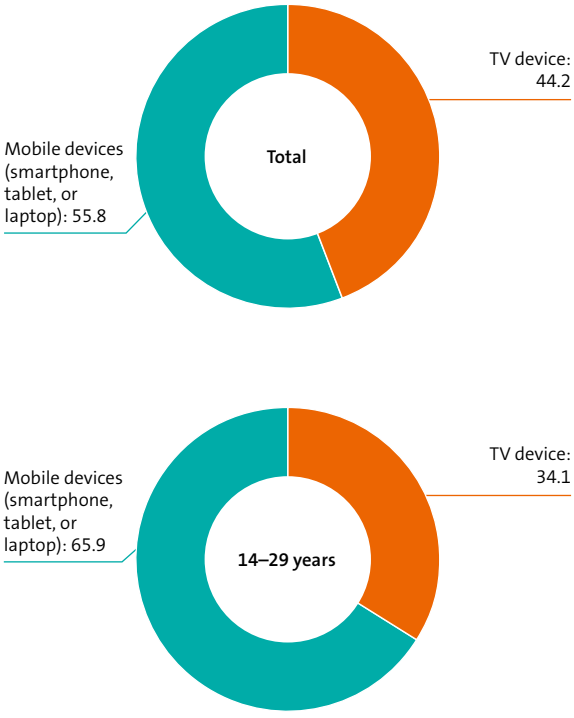
OTT content is watched by most on the TV set, smartphone, and computer

For many people, it is now normal to view video programming at home in different rooms and in very different situations. For example, someone may watch the livestream of a TV channel or a VOD offering on their smartphone or tablet while preparing a meal in the kitchen and then continue watching on the big screen in the living room while eating. In families in particular, it is quite common to watch on small mobile screens when the TV is occupied by another family member and young people in particular are not always interested in letting all family members participate in their video consumption. Therefore, they like to retreat to their PC or another device to view their preferred content in peace.

The examples show: viewing scenarios and transitions between devices are nowadays extremely differentiated and at the same time also fluid. Almost three quarters of regular OTT viewers do so on the TV set. This makes connected TV the most-used screen device for video content from the Internet as well. Two-thirds (65%) of the 52 million regular OTT viewers watch it on their smartphone, while the same number use their PC and laptop for this purpose. Tablet use follows in fourth place with 38% of regular OTT users.

Fig. 12

Proportion of TV and mobile devices used (at home)



Basis: 52.316 million people aged 14 and over in Germany who view OTT programming at least once a month (n = 5,776), 13.268 million aged 14–29 (n = 1,363).

OTT users spend more time watching video on mobile devices than on TV

To better understand video viewing at home, this year for the first time we asked about the proportion of time spent watching on a stationary TV and on mobile screen devices. Regular OTT viewers spend just over half (56%) of their home video viewing time on mobile devices, such as smartphones, laptops, or tablets. TV sets account for 44% of screen time, according to the respondents. Across all age groups, more time for video viewing is spent on mobile devices than on the TV set, even if the proportionate usage time on mobile devices of the youngest is higher than that of the older ones, as expected (see Fig. 12). These findings, which are perhaps somewhat surprising at first, can presumably also be explained by the fact that the number of mobile screen devices per household is now significantly higher than the number of TV sets avail-

able and they are therefore also used as second or third devices for TV reception. In addition, a large number of short formats such as YouTube clips or videos on social networks are often viewed on mobile devices throughout the day, the use of which adds up in reality as well as in subjective perception.

Viewing OTT videos increases across all service types, video-sharing services still in front

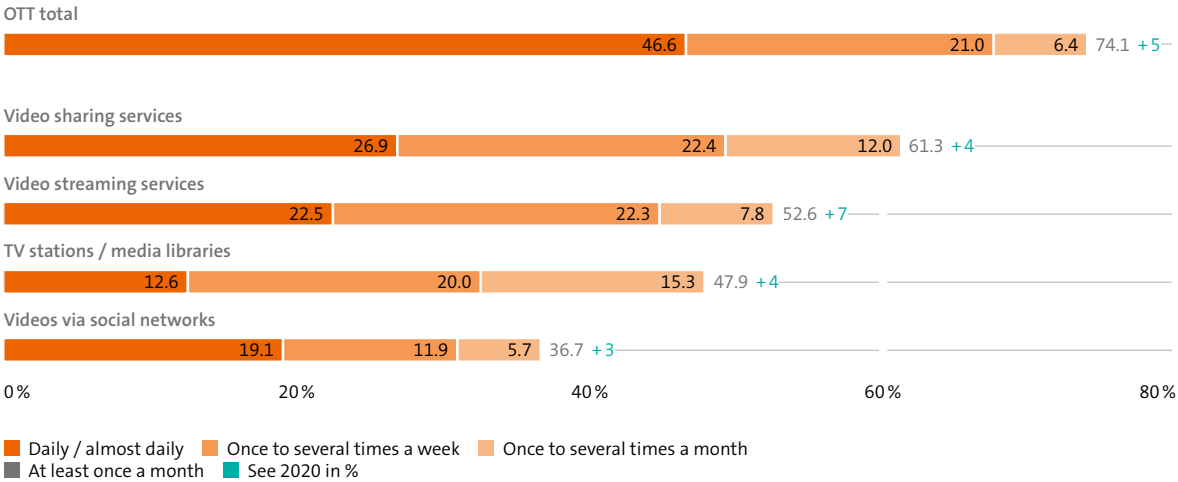
A good 52 million people aged 14 and over in Germany regularly watch video services from the Internet. Compared to the previous year, all service types have gained in users. The most popular services are video sharing services such as YouTube. More than 43 million people regularly watch videos there, which is just under 4% more than in the previous year and corresponds to 61.3% of the population aged 14 and over in Germany. While viewing in the 14- to 29-year-old age group increased only slightly at a very high level of 91% (+1% year-on-year), growth is being driven primarily by the over-50 age group (41%, +6%) and the 30- to 49-year-old age group (77%, +4%). The proportion of intensive users, i.e., those who access video portals weekly (22%, +2%) or daily (12%, +1%), has increased. Monthly use remains stable at 27% of people aged 14 and older. Looking at the offer level, we see that YouTube is the undisputed market leader in this category (see fig. 14).

More than 37 million regularly use video streaming services

Just over half (53%) of people aged 14 and over in Germany use video streaming services. This is a good 6% more than in 2020 and corresponds to more than 37 million people in absolute terms. This means that video streaming services are recording

Fig. 13

OTT usage by offer type



Basis: 70.635 million people aged 14 and over in Germany (n=7,507)

the strongest year-on-year growth compared to other internet video services. Here, too, growth is driven almost exclusively by the older age groups. In the 30–49 age group, the number of regular users is up by 10% to 71%. Just under one third (30%) of the over-50s regularly view services from Amazon, Netflix, Disney and co., which is 8% more than last year. The youngest group (14- to 29-year-olds), on the other hand, remains stable at a level of 84%. Looking at the frequency of use, the number of daily users rose only slightly to 8% (+1%). At 22%, weekly use is 3 points higher than in the previous year, while the number of monthly users has risen by just under 2% to 23%. The field is clearly dominated by the 3 major US streaming portals Netflix, with 27 million regular users in Germany, Amazon Prime Video (25 million), and Disney+ (11 million). In addition to the well-known US providers, the VOD services of platform providers such as Telekom, Vodafone, and Sky Deutschland, as well as specialized sports broadcasters also achieve relevant regular usage figures (see Fig. 14).

Just under half of the population aged 14 and over regularly views the online programming of TV program providers

Just under one half (48%) of people aged 14 and over in Germany regularly use program services from TV providers via the Internet, which corre-

Internet video providers

Video platforms such as YouTube or Twitch, for example, allow both professional providers and users to distribute videos on their platforms. Parts of the services are thus not selected or designed by the platforms. Similarly, videos on **social networks** such as Facebook or Instagram are provided by private and professional providers. Social networks are generally less specialized in video content than video platforms.

The services of **video streaming providers** such as Netflix, Amazon Prime, or DAZN, on the other hand, are generally pre-selected and curated by the streaming service operators. The providers make a pre-selection of the on-demand content and/or develop broadcasting and program schedules for linear broadcasting services. Users usually pay a fixed subscription price, usually charged monthly (SVOD), or pay transaction-based for access to individual content (TVOD). Some providers also combine both models and offer content on both a subscription and transaction basis.

Numerous services from TV program providers can also be reached via the Internet **(OTT TV services)**. These include so-called BVOD services such as the media libraries of public broadcasters and the platforms of private TV providers such as Joyn and TVNOW, as well as Internet-based broadcasting platforms such as Zattoo or waipu.tv and other web-based video services from TV broadcasters. What the OTT TV services have in common is that they are closely related to broadcast TV and predominantly exploit the TV broadcasters' programming as live, VOD, or catch-up services. Similar to streaming services, the business models are heterogeneous and range from exclusive financing through broadcasting fees to advertising-based financing (AVOD), payment for individual program content (TVOD) and subscription models (SVOD).

sponds to almost 34 million people and an increase of 4% over the previous year. This puts TV program providers just behind video streaming services (see fig. 14).

BVOD: Media libraries and OTT services of private broadcasters increasingly popular

The online video services and apps of TV broadcasters are particularly popular. These are often summarized under the catchword Broadcaster Video-On-Demand (BVOD). Contrary to what the name suggests, these are not exclusively VOD services Rather, most TV broadcasters offer both the option of watching the linear TV program "live" or time-shifted via the Internet and an extensive on-demand offering with downloadable TV program content or exclusive content (see the text box on page 20).

The most popular BVOD offer is the free media library of the public broadcasters. Almost 29 million people regularly view the programming of the ARD and ZDF program families, which corresponds to 42% of the population, almost 5% more than in the previous year.

15 million people regularly access the online programming of the private broadcasters.

The programming of private TV providers is viewed by 22% of people aged 14 and over in Germany, which also represents an increase of 4%. In absolute terms, that is just under 16 million people. All services have increased. The top position is held by the RTL Group with its TVNOW service, which is regularly used by just under 14% of the population. Joyn is in second place. A good 8 million people (11%) access the platform jointly operated by the ProSiebenSat1 Group and Discovery at least once a month. A good 9% regularly view the online programming of other TV stations, 5% regularly watch the programming of pure Internet stations such as bild.tv[5].

Almost three quarters of regular viewers of private BVOD programming also use public service media libraries

Many BVOD users access both the programming of public broadcasters and the Internet programming of private broadcasters. Only slightly more than 4 million people view only the online programming of private broadcasters and do not use public media libraries at all. More than seven in ten (72%) viewers of commercial BVOD programming, on the other hand, also access the free media libraries of public broadcasters at least once a month.

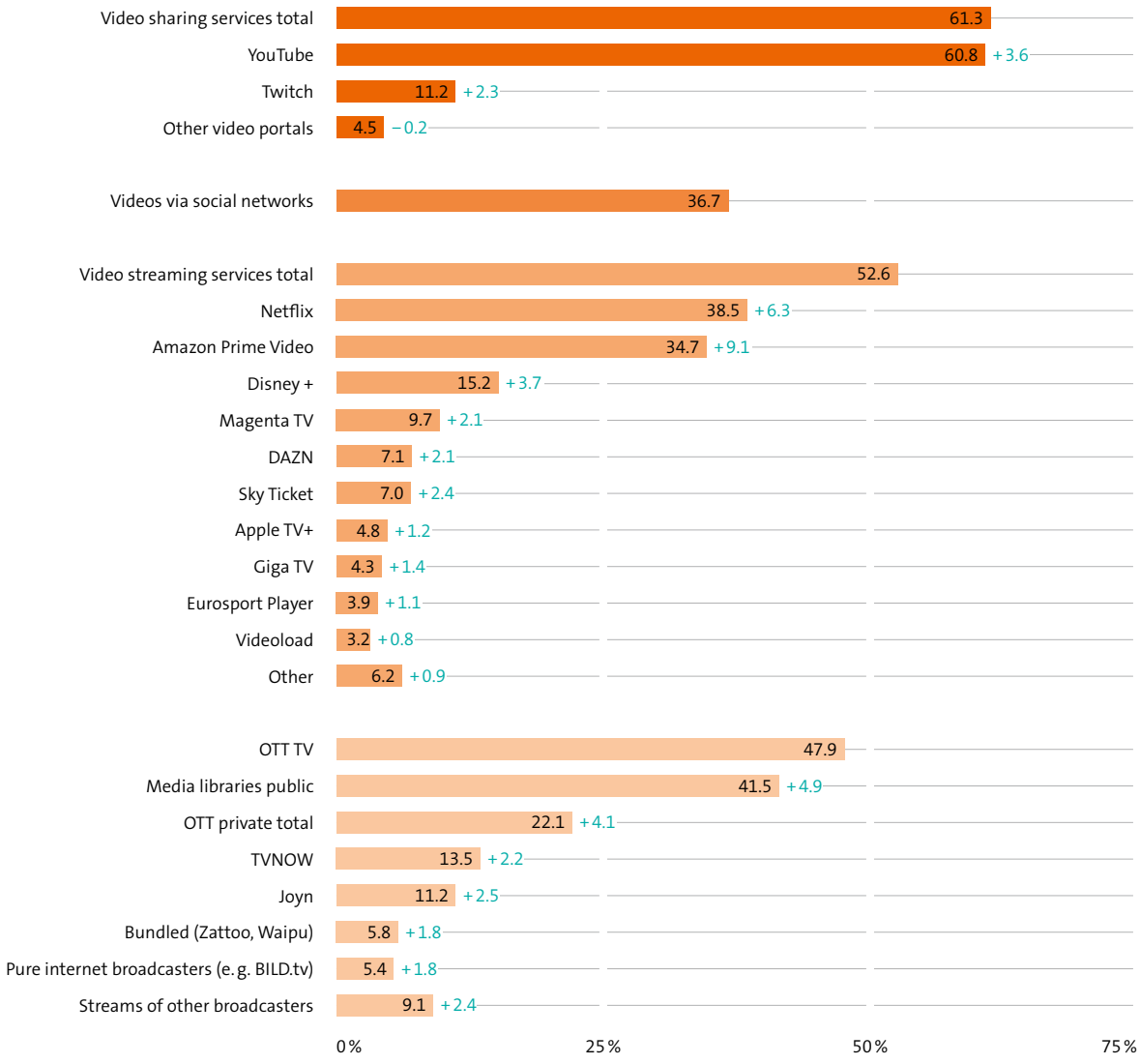
BVOD viewers of private broadcasters are younger and more often still in training

If the two groups are compared, clear differences can be seen despite the large overlaps. With an average age of 45, users of public broadcasters (among others) are on average almost 6 years older than those who (also) view private broadcasters. The age difference is also reflected in the respective employment profiles. While one in ten regular commercial users is still at school, more than one in six (18%) users of public media libraries is already retired. There are also clear differences in the formal education level. Four out of ten users of public media libraries have a general university entrance qualification – among users of private online programming, the figure is one in three to four (28.2%).

5 The Bild Digital Live TV program broadcast at www.bild.tv can now also be accessed via broadcast TV distribution channels. At the time of the survey for the Digitization Report, this was still internet-only programming.

Fig. 14

Regular use of Internet videos by provider



Each service is used at least once a month; basis: 70.635 million people aged 14 and over in Germany (n = 7,507).

Users of public media libraries have a greater affinity for TV and a lower intensity of use

Overall, users of public service media libraries are still somewhat more TV-savvy. At 38%, their time budget for classic linear TV is about 6% higher than that of those who (also) use private BVOD providers. If we look at the intensity of use, we see that private broadcaster programming is viewed daily or almost daily by a good third (34%) of their users. By comparison, the media libraries account for just over a quarter (27%). The fact that a good 86% of those who access private programming also regularly use at least one video streaming service also speaks for a stronger online and VOD affinity. That is about 13% more than those who access public media libraries. The willingness to pay is also more pronounced among users of commercial BVODs. While slightly more than two out of three (68%) users of public service media libraries state that they also view paid video programming on the Internet (whether for a regular fee or for individual viewing), the figure for viewers of private BVOD programming is well over three quarters (80%).

Conclusion

There has been much discussion over the past year and a half about whether and how the corona pandemic will further drive the digital transformation of society. In this sense, the pandemic is often understood as a catalyst for a development that is already underway, furthering the path that has been taken and taking it to a new level of development. Television and video broadcasting in Germany was already fully digitized before the pandemic. However, the digitization of the infrastructure has always been the starting point for the subsequent processes of upheaval and change – also in the video markets. The current findings of the Digitization Report Video clearly show that the last year under corona conditions has also contributed to an acceleration of already initiated changes in the television and video sector.

The central trend of the upheaval is the ever-increasing shift in the use of videos towards IP networks. This can be seen at the level of TV transmission channels – within just a few years, a new type of TV reception via the open Internet has become established that no one could have imagined just a short while ago. At the same time, the broadcast TV reception channels still dominate clearly and by a large margin. Nevertheless, in just a few years, Connected-TV-only households have achieved market shares that can (almost) keep up with many an established TV transmission channel. In addition, the number of people with access to broadcast TV has been declining for several years, especially among younger people. This does not mean that TV broadcasters are losing them, but that they are no longer using broadcast programming and instead use various different devices – mostly via the Internet. The fact that television is increasingly losing its first-among-equals position for screen devices in terms of screen time spent at home fits with this trend. Many people now fluidly transition between devices and transmission channels – they start in front of the big screen in the living room and continue watching on the tablet in the kitchen or bedroom. At the same time, they watch a video or trailer on YouTube or on a social networks and finally decide to finish watching the current TV movie in the media library tomorrow. The flexibility of IP transmission makes this possible. At the same time, however, this also contributes to the increasing importance of ease of access of programming. Here, the findings of the Digitization Report clearly show that the legislator's expansion of platform regulation to include the area of user interfaces was urgently needed.

This transformation is also evident at the level of video use. Here, the pandemic has primarily pushed the use of video streaming services. Increasingly, older generations have also joined the league of regular or even more intensive users. The number of regular users has strongly increased for the second year in a row across all types of services, i. e. regardless of whether streaming providers or BVOD. Unlike broadcast television, whose regular viewership is now again decreasing after an increase last year (according to the current survey), it currently looks as if the increase in OTT and VOD use will be sustainable. However, this can only be said with certainty in the coming year, when the pandemic is over and life is back to normal.

However, the pandemic has also clearly shown that broadcast television is of great importance in providing reliable and relevant information. It's no coincidence that its usage frequency skyrocketed during the height of the pandemic. This is where the inherent strengths of linear television, which have perhaps been somewhat forgotten in recent years, came into play: its ability to be live and immediately on the scene and to quickly provide people with visually powerful impressions of current and relevant events. Apparently, the pandemic has helped broadcast TV find its way back to its inherent core competencies – at least the latest personnel and programming decisions of the major private broadcasters indicate that classic live TV programming is also in the process of finding its place in the new diversity of the video. On the net, the broadcaster groups have recently been able to successfully build up a local counterweight to Netflix and the like with numerous in-house productions and series. At the same time, linear TV is increasingly focusing on relevant live content. To this end, not only are familiar faces such as Jan Hofer and Linda Zervakis being brought into the program, but new journalistic formats and special programs are also being developed. In the process, TV is returning to its classic strength – its live character.