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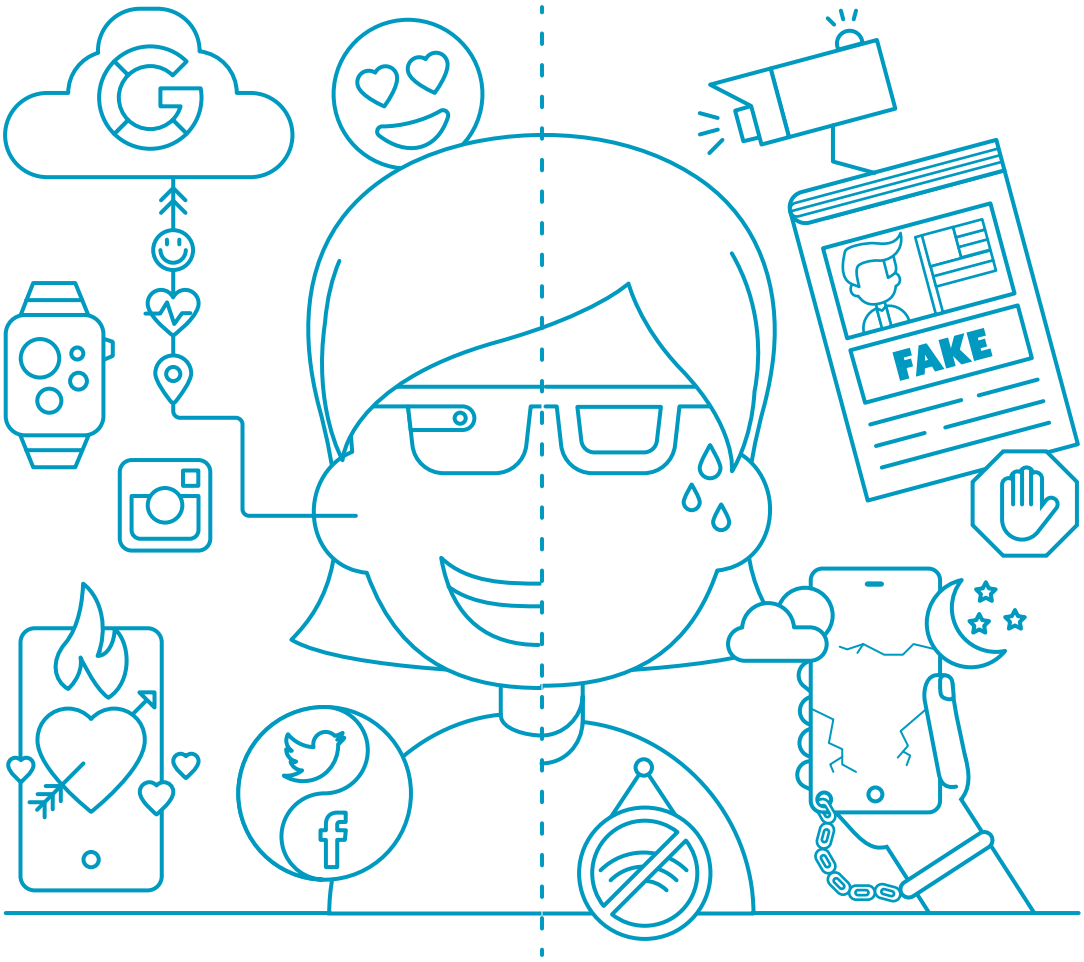
IMEC.DIGIMETER 2018

MEASURING DIGITAL MEDIA TRENDS IN FLANDERS



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Authors: Bart Vanhaelewyn, Lieven De Marez

Data collection & field work: Keshia Vleminx, Koen Vervoort

Project management: Koen Vervoort, Eva Steenberghs

Infographics & interactive data visualisation: Nils Blanckaert

For more details about the report, or additional analysis on the data, please contact
Bart Vanhaelewyn (bart.vanhaelewyn@imec.be)
For more info on how Digimeter impacts your company, please contact Olivier Rits (olivier.rits@imec.be)

Project Director: Prof. dr. Lieven De Marez (lieven.demarez@ugent.be)

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FOREWORD

In the middle of the living room stands an old-style cathode ray tube television set, showing a live view of television programs via an analog connection. The family in this room is still arguing volubly about whether or not they should switch to digital television, with a set-top box. With digital television, you can watch on demand, the daughter keeps saying, to which the father replies that they can do that now anyway, with their video recorder or DVD-player. Dad is a fervent user of Teletext, especially to keep up with the sports results. Elsewhere in the living room there is also a desk with a desktop computer. The oldest daughter has since bought a laptop, a device that is becoming increasingly popular. Not just for doing schoolwork, but also for being more active on social media. She is a fan of Netlog and MySpace, but can see that more and more of her friends are switching to Facebook. Mum is sitting in her armchair with her new Nokia phone. She has just received a text message from her youngest son saying that he has missed the bus.

That was the scenario in an average living room in Flanders when the first Digimeter report was published in 2009. A great deal has changed over the past ten years. These changes are related mainly to the arrival of the tablet – and particularly of the smartphone. These devices came along at just the right moment. There were increasing wireless capabilities for connecting with the Internet (via mobile data and wi-fi). Social media were also becoming increasingly popular and, for many, they were the so-called 'killer app' that convinced people to get a mobile phone for the home. The availability of a mobile device that you used to connect with the Internet wherever you happened to be so that you could check your social media, meant that suddenly everyone wanted to have a smartphone and use social media. A tablet was designed more for longer, more intensive sessions (watching videos, gaming, reading the newspaper online, etc.). As a result of increasingly larger smartphone screens and better picture quality, the smartphone gradually took over the role of the tablet. Since then, the smartphone has made a lot of other devices as good as redundant: satnavs, portable music players, digital cameras and more. Even wristwatches have become more like fashion accessories. If you want to know what the time is, you simply look at your smartphone.

Since 2015, we have seen this increased central role of the smartphone in our lives also has a flipside for a larger and larger group of people. Because you can be reached by everyone all of the time, wherever you are and have constant access to information, the perception has grown up that we can't live without our phones any longer. Just as social media gave smartphone sales an enormous boost, so our feeling of dependence on them has grown. For instance, there's the 'fear of missing out', or FOMO, by which people are afraid that they will miss something important if they can't/don't check their social media all of the time. Many people also identify with the fear of suddenly being without a smartphone, for example if they have a flat battery. Or there's the pressure to respond quickly to a WhatsApp message, especially as you know that the sender can see that you have read the message because of the blue ticks. All of these elements combined create the feeling that there is a major overabundance of smartphone usage in our lives – something that the Digimeter report in 2015 called 'digibesitas'.

In 2018, we can see that not only is this feeling of 'digibesitas' increasing, but that it is a part of a greater whole: the love-hate relationship that we have with technology and digital media. We remain convinced that digital media have many benefits to offer and that advances in technology can provide an easier and more comfortable life for us. But we can also see that we need to be cautious about the downside, such as digibesitas or infringements of our online privacy. This is leading to increasing numbers of Flemings seeking specific solutions for these problems, but without sacrificing the benefits. For example, they are putting their smartphone to one side more when they are having a conversation or meeting, while people are only letting others have their data if they are convinced that it will bring them a benefit.

All of this makes it difficult to predict what the typical living room will look like in 2028. Will the smartphone still be the number one device around which everything else revolves? Or will this hub function be taken over by smart speakers, with a smart virtual assistant carrying out spoken commands? Will social networks as we know them today still exist, or will other forms of networks have come into being? Will Google, Apple, Facebook and Amazon still be the market leaders worldwide and remain untouchable, or will we be talking about these companies in the same way as we talk about Altavista, Nokia, Netlog and mail order companies now? Will Microsoft have been able to regain just a fraction of its market share, succeeding just as it has in the past to totally change its skin and reinvent itself into a new, innovative business (such as the Hololens, which is currently the benchmark in Augmented Reality glasses). Are today's tech giants capable of going back to the drawing board and throwing their business model out of the window before it's too late, if they have to?

Maybe we shouldn't be wondering what the living room will look like, but how it will be controlled and run. All sorts of new types of interface are coming along, such as voice-activation – and these are currently receiving the most attention. But especially the smart assistant behind it and more generally any form of artificial intelligence (AI) may generate an about-turn in how we will use technology and what our attitudes are when we look at it. Instead of literally having to enter each command to

achieve a result, technology using AI may be able to predict exactly what we want. If it does, this will bring us to a situation in which technology becomes embedded ever more deeply in our day-to-day lives, but with increasing invisibility at the same time. This may make AI easier to use, but it also raises ethical issues: what price are we prepared to pay for that ease of use? Will we be willing to disclose increasing amounts of data to others to 'feed' AI? Do we want to accept that it is becoming more and more difficult to find out exactly how a particular result was arrived at? So, it looks as though our love-hate relationship with technology still has a long way to go and that it will manifest itself in other areas.

20/02/2019

Lieven De Marez
Bart Vanhaelewyn
Olivier Rits


'09


'18

METHODOLOGY

Digimeter acts as a monitor, tracking the ownership and use of (new) media and ICT, as well as people's attitudes to technological developments. To produce these figures, each year imec surveys a representative sample of at least 1,500 residents of Flanders aged 16 and over.

- This is the 11th edition of Digimeter since it began in 2009. The first three editions were at six-monthly intervals, but since then Digimeter has evolved into an annual survey.

- To obtain a representative sample, quotas were set for recruitment to the survey, based on province, gender, age (16+) and level of education. These quotas are based on the most recent official demographic statistics[1]. To conclude, the final dataset is then weighted, based on these four criteria.

- The dataset is made up of the answers from 4,547 respondents, who completed the questionnaire in the period of September-October 2018. The majority of respondents (65%) completed the survey online. These respondents were recruited through imec's own networks, as well as via strategic partnerships with VDAB and Mobile Vikings. The other 35% took part in the survey offline. This included answering questions at markets, in libraries and during events (such as 'Seniors at the Movies' by Kinepolis), where people were asked whether they would like to complete the survey questionnaire on the spot, either using tablets provided by the people conducting the survey, or via a paper questionnaire.

- As is the case each year, the report segments the Flemish population. In contrast with previous years, where the clustering was carried out based on traditional and digital media, this year the option was taken to divide things up based on attitudes to technology and online privacy. The K-means cluster analysis was conducted based on 16 attitude items (each expressed on a five-point scale, ranging from "totally disagree" to "totally agree") in five areas: attitude to technology (five items), digital skills (four items), concerns about privacy (three items), control over privacy (two items) and interpersonal privacy (two items). This resulted in the construction of five segments.

- Imec Digimeter draws a picture of the ownership and use of media, ICT and technology. The findings are based on self-reporting through the conduit of a questionnaire. As a consequence, the results reflect the perception of the respondents about how they assess their own consumption of media. The methodology chosen does not allow for testing assumptions about effective media coverage.

- The survey looks at the adoption of devices within the household: who has access to a certain technology or service in the household. This, therefore, does not measure personal ownership; the results also include devices within the family situation (such as the television screen in the living room). Digimeter does not make statements on a household level (how many households have access to a certain technology or service). This latter point requires a different way of recruitment and sampling.

- Differences between percentages (for example in comparing this year's results with recent years) are expressed in percentage points, which comes down to the absolute difference between both percentages. Imagine, for example, that the adoption of a device rose from 20% to 30%. That is an increase of 10 percentage points. The same difference expressed in a relative percentage is an increase of 50% (because to go from 20% to 30%, there needs to be an increase of half over the original number).

- The percentage values in the tables and graphs have been rounded to the integral number. This can produce a small deviation in instances where a sum of 100% is expected. This has no effect on the interpretation of the results.

- Each respondent had an equal chance of winning a voucher, ranging in value from €10 to €500. The total prize pool was €1,500.

1 https://statbel.fgov.be/en

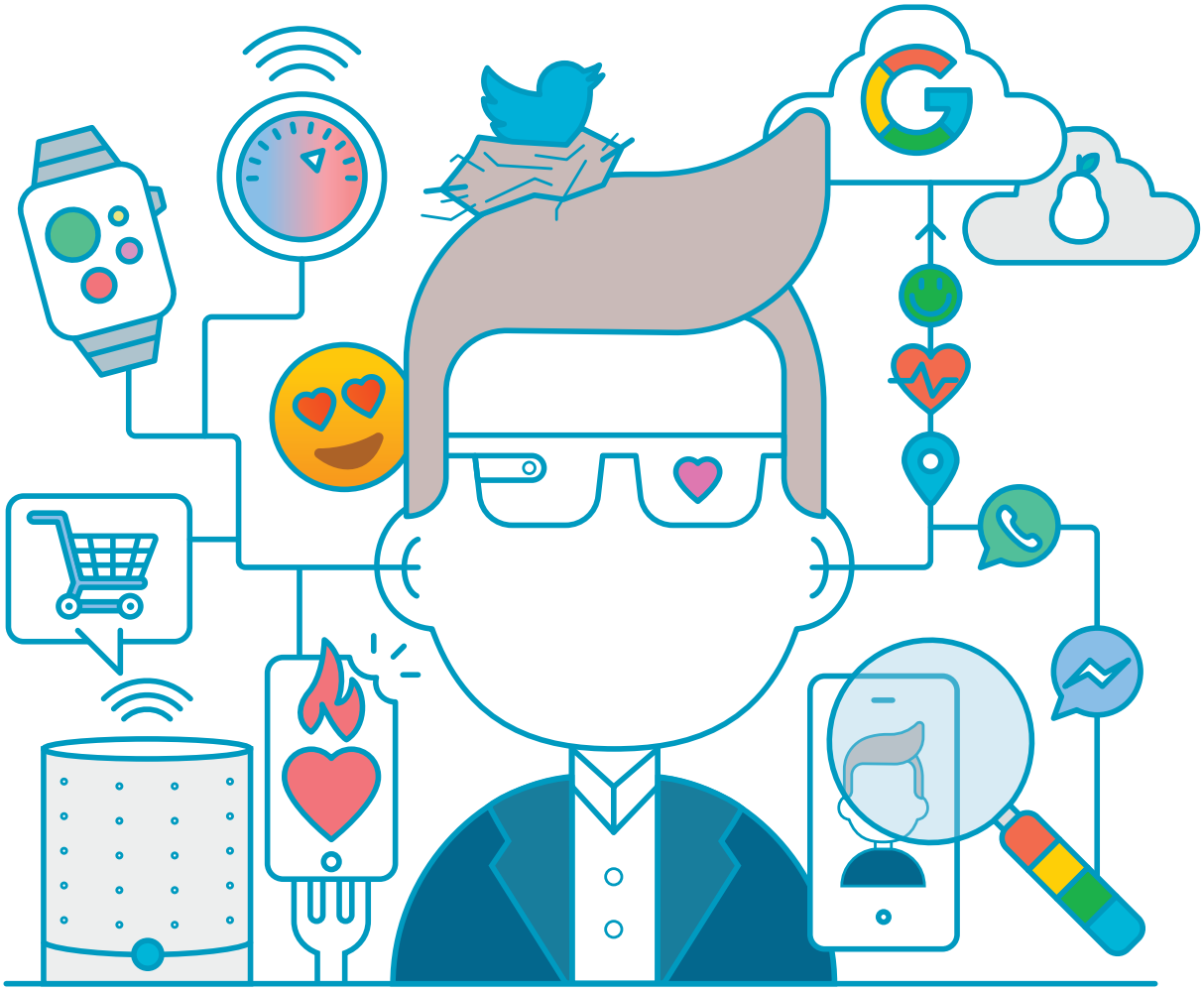
PROFILES

As is customary every year, the Digimeter data also provides the basic information needed to segment the Flemish population. Last year Digimeter showed us that virtually the whole of Flanders is digital. Except for about 5%, every Flemish home had access to at least one 'smart device'[2]. Yet this year, only 2% didn't have such a device in their home. This means that segmenting by ownership and usage adds little distinguishing value any longer. In parallel, Digimeter also told us that, despite this rise in digitization, there seems to be increasing tension in the relationship that Flemings have with digital technology. In past years, though, this was evidenced mostly by symptoms such as "digibesitas" or increasing concerns about the number of times people are in contact with their smartphone. Now, in addition to the digibesitas phenomenon, there are extra concerns about the privacy of personal data and the impact of fake news, etc. These are all things that are still not really tangible for people in Flanders, but which they are increasingly aware of. It is for this reason that this year we have focused our segmentation on attitudes to technology. Who is a fan of technology and who would rather keep it as far away as possible? Who is prepared to share their personal data online with companies and who is irritated about the lack of transparency that businesses adopt when it comes to online privacy? Who feels comfortable in using digital media and who thinks everything is going much too fast? The answers to these and other attitude-related questions have generated five profiles.

The first two profiles, the *Close Friend* and *It's Complicated*, show something of a love-hate relationship with technology. They acknowledge the added value that technology brings, but are also concerned about the impact that it has on our lives and society. In *the Close Friend*, the positive ultimately comes through and we see high levels of adoption and usage figures for digital media and technology. But in *It's Complicated,* concerns about technology take the upper hand, which is shown by lower ownership and usage figures.

The *Passionate Lover* is a big fan of technology and has few concerns about any negative impact it may have. Whether it's about smartphones, social media or privacy, the *Passionate Lover s*ees benefits in every direction and thinks there is little in the way of negative aspects. So it comes as little surprise that this segment has a high level of ownership and usage in terms of digital media. The *Happy Single* is the opposite of the *Passionate Lover*. They are fierce opponents of technology and remain totally unconvinced about any benefits that the digitization of society has to offer. Although plenty of them may have a smartphone, computer or tablet at home, they are also very concerned about the effects of technological developments. The *Distant Acquaintance*, finally, is totally disinterested in digital media or technology. This profile is not immediately convinced about the added value of technology, but nor is it particularly concerned about any negative impact technology may have. So it is also logical that this profile has very low ownership and usage figures for digital media and technology.

2 A device that can be connected directly to the Internet: smart TV, computer, smartphone, tablet or smart wearable

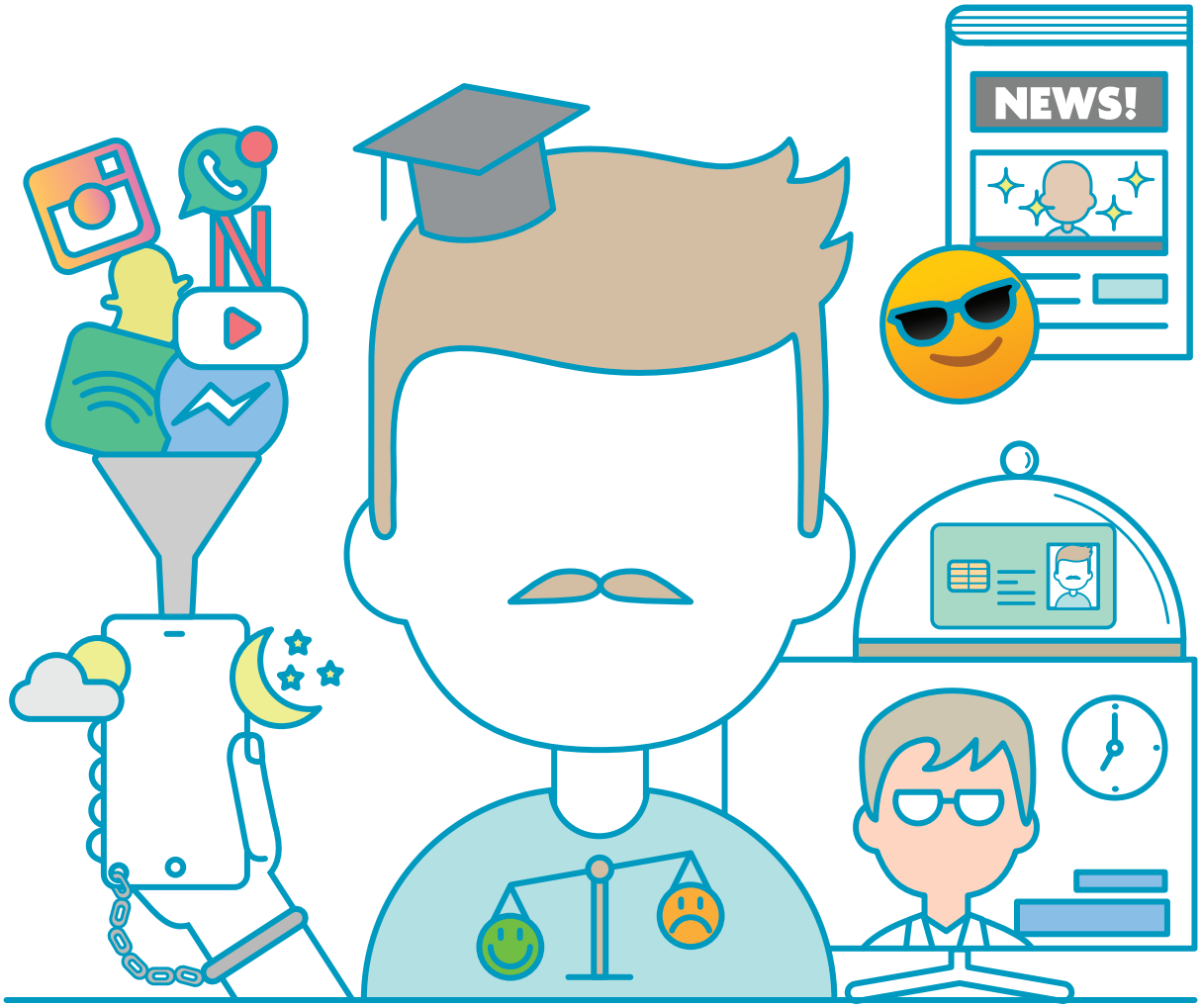


THE PASSIONATE LOVER (21%)

The *Passionate Lover* has an average age of 45. This segment has more men than women and is often highly educated. The *Passionate Lover* is usually married or living with someone, with or without children. Managers and the self-employed appear more frequently in this segment than in others.

This profile displays unconditional love for technology, believing in its benefits and positive effects and with little concern about the possible problems. Certainly in the area of smartphones and privacy, this profile is unconcerned about the possible negative consequences, although it is also convinced about the benefits and the fact that users themselves have control in this area. They are also little concerned about social media, although they are less of an out-and-out 'fan' than the *Close Friend* and *It's Complicated*.

The *Passionate Lover* has high adoption figures, as does the Close Friend. But in this segment, the laptop tends to be the reference device, rather than the smartphone. The *Passionate Lover* reports a high level of knowledge about AI, VR and AR and is very willing to share data online with companies or government departments.

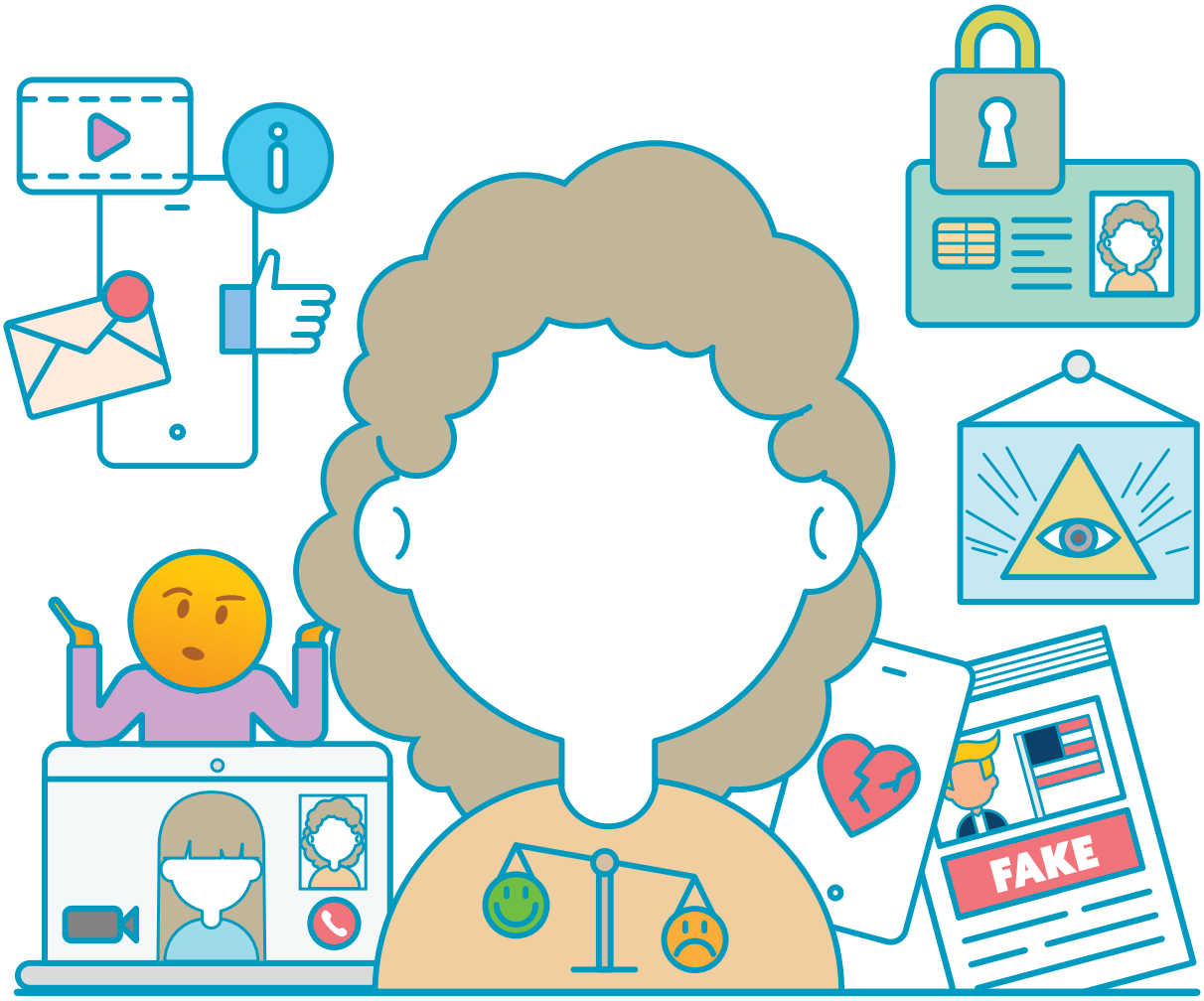


THE CLOSE FRIEND (20%)

The *Close Friend* is the youngest group (average age 37; 72% are under the age of 45) and is evenly divided between male and female. They are fairly well educated and includes a relatively high number of students and employees. This profile has a love-hate relationship with technology, but in the end, the 'love' part of the spectrum wins through. This group very much believes in the added value of technology. It firmly believes that social media provide greater connectedness, that the Internet makes us better informed and that the smartphone saves us time. More than the other groups, this profile is willing to share data with companies if there is a benefit linked to doing so (e.g. better personal service). It also sees itself as highly skilled in terms of digital technology.

At the same time, the *Close Friend* is also concerned to some extent about the impact that technology has on our lives. This profile believes that it sometimes spends too much time on a smartphone or social media. It also thinks that users have too little control over the data that companies collect and use about them. But despite these concerns, this profile remains positive about technology.

Together with the *Passionate Lover*, the *Close Friend* has the highest adoption figures, although in this segment, the smartphone appears to play a more important role than with the *Passionate Lover.* Online entertainment (online video, gaming, social media) also scores very highly here.



IT'S COMPLICATED (25%)

It's Complicated has an average age of 46, includes more women than men and is usually educated to a low or medium level. It includes a relatively high number of students, blue-collar workers and unemployed.

As with the *Close Friend*, this profile has a love-hate relationship with technology, but in this instance, the negative side weighs more heavily. For instance, *It's Complicated* can see the benefits of social media and also agrees to a large extent that the Internet makes us much better informed. On this latter point, *It's Complicated* is also concerned about the effects that fake news has on society. It is also concerned about the time it spends on smartphones and cannot imagine being able to get through the day without social media. But *It's Complicated* is (fairly) interested in technology and acknowledges that technology can make our lives easier and more comfortable. Yet due to a lack of trust in their own skills, *It's Complicated* often tends to avoid digital technologies. If this profile could become more familiar with technology, the balance would be likely to be more positive. Privacy is not really an issue for this profile.

It's Complicated reflects a fairly average figure in terms of owning digital technology, although its use of smartphones is relatively high. Knowledge about concepts such as AI, AR, VR, etc. is quite low in this segment.

THE HAPPY SINGLE (18%)

The *Happy Single* is an older segment (average age of 56; 80% are over 45), with virtually as many males as females. This profile is medium-to-highly educated and includes a relatively high number of retirees, employees and public servants.

The *Happy Single* has a very pronounced negative opinion of technology. For example, it objects greatly to phubbing (using the phone while in company), but does not think that it spends too much time itself on smartphones (which is also logical, given the low smartphone usage figures in this segment). It also gets very hot under the collar about the lack of control of one's own data online, and is irritated by the lack of transparency shown by companies in the area of privacy. The *Happy Single* would rather not share any data with companies, even if there is a benefit involved. This profile fears the impact that fake news has on society and on themselves and believes that social media create more problems than positive effects. In general, the *Happy Single* does not think that technology is fun or interesting, nor does it believe itself to be very skilled in this area.

This segment has only average adoption figures and usage is very low. This negative attitude does not appear to stem from a lack of knowledge. They say that they are aware of what AI or VR mean, plus they also have a smartphone and a laptop, but usually don't use it much. They'd also rather not get involved with social media, online video and gaming. More than other profiles, in at least half of cases, they claim to read the general terms and conditions and the privacy policy before registering online. This is not surprising given the importance that this profile attaches to privacy and how suspicious they are when it comes to technology and digital media. In terms of their news consumption, they are great fans of traditional media (newspapers, TV (national and regional) and radio).

THE DISTANT ACQUAINTANCE (16%)

The *Distant Acquaintance* is an older segment (average age of 57, with 79% over 45) with somewhat more women than men. The *Distant Acquaintance* is usually not so well educated and relatively often is single or married without children. There are also relatively more retirees and unemployed in this segment.

This profile is indifferent to technology, reporting few pronounced positive or negative attitudes. They display little interest in technology and are certainly not convinced of its benefits. But on the other hand, they are also not very concerned about its negative impact.

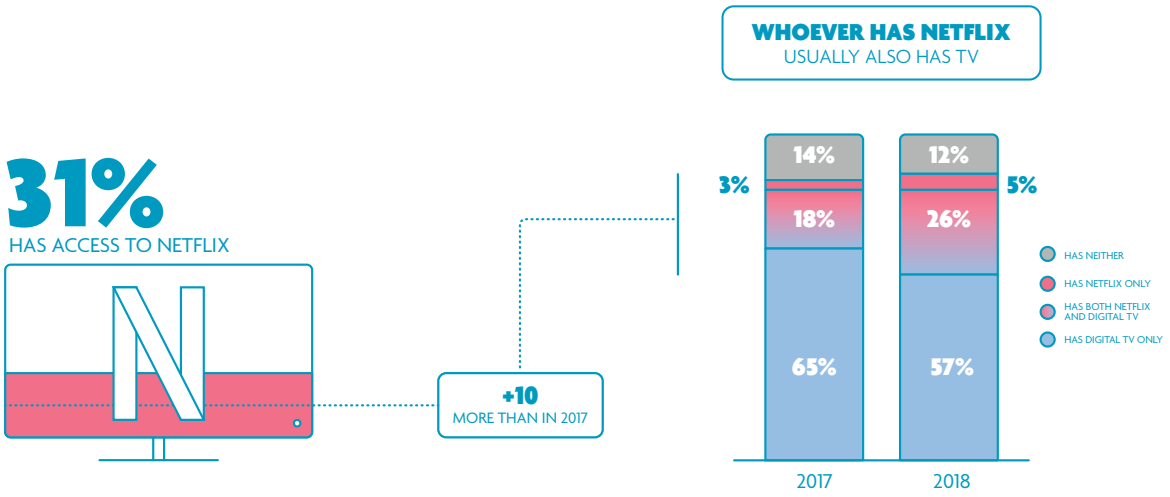
This lack of interest can also be seen in the adoption figures for digital media devices and is the lowest of all the profiles. They are also the lowest users, seldom using social media, watching videos online or listening to music via streaming services such as Spotify. They do not like sharing personal data online with companies or apps. They display very little knowledge about AI and believe in its possibilities less than other profiles.

CHAPTER 1

DEVICES & CONNECTIONS

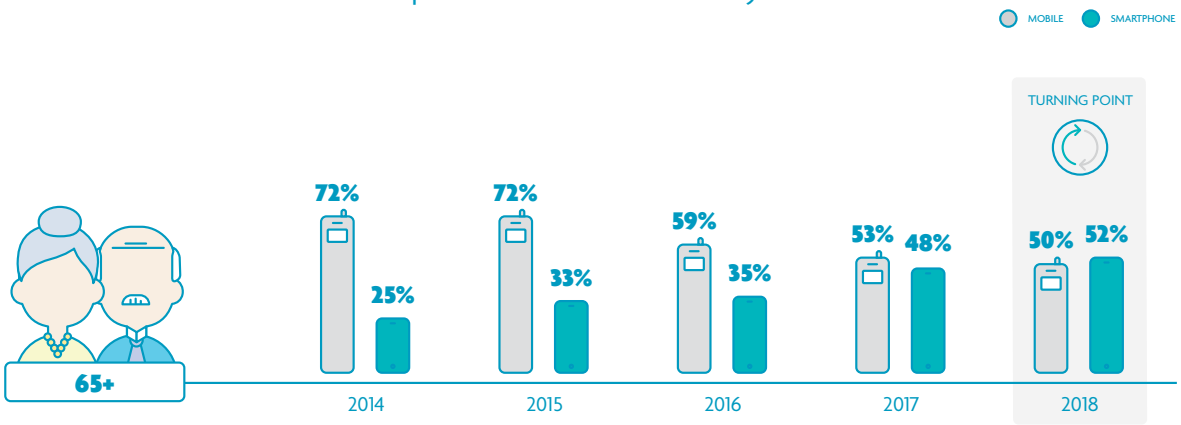
Ownership of smartphones and Netflix continues to rise

THE GROWTH OF NETFLIX



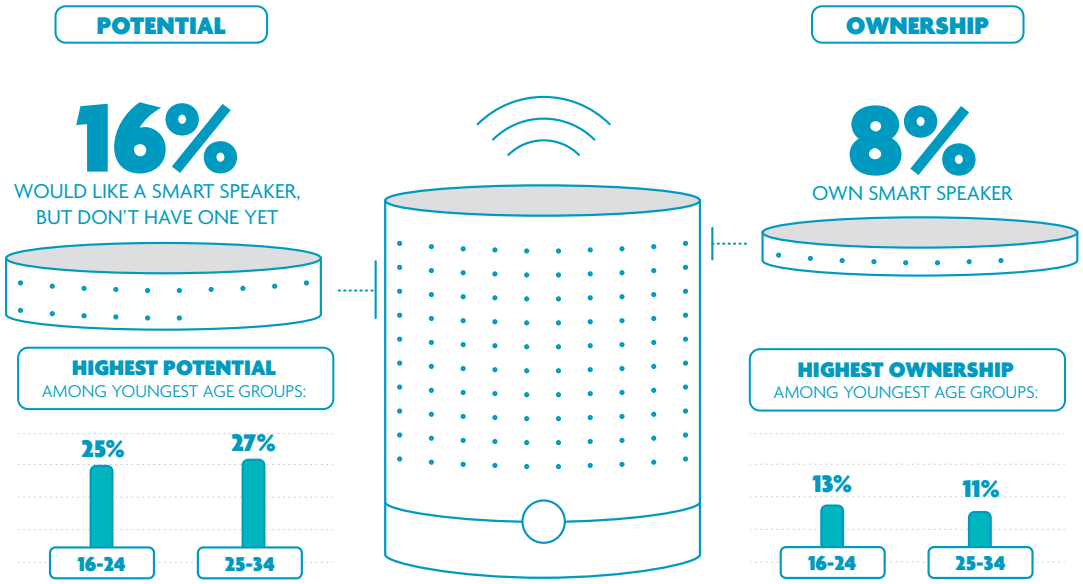
SMARTPHONE VS MOBILE

For the first time, more over-65s have a smartphone than an ordinary mobile



SMART SPEAKERS

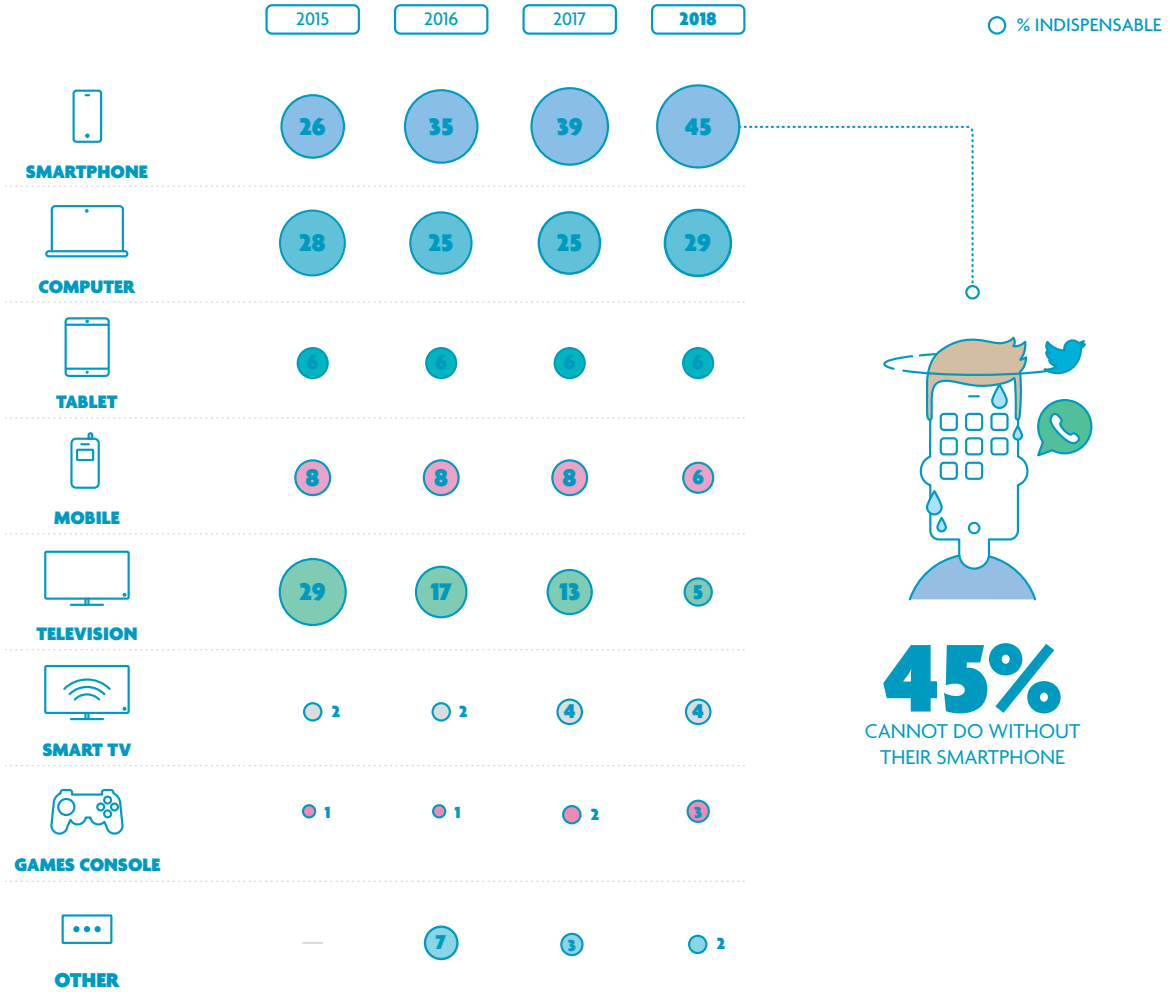
Potential and ownership highest among young people



ESSENTIAL TECHNOLOGY

Smartphones the most essential device for more and more Flemings

WHAT TECHNOLOGY CAN'T YOU DO WITHOUT?



DEVICES & CONNECTIONS

Taken worldwide, sales of computers[3] and tablets[4] have been declining over the past few years. Added to the mix is the fact that smartphones appear to have peaked, too: each of the past four quarters has seen a year-on-year fall, compared with one year previously[5]. This is a trend that has prompted Apple, for example, to stop releasing quarterly sales numbers[6]. There are, of course, plenty of reasons why smartphone sales are declining (market saturation and devices with a longer service life are two of the reasons given most frequently). But an important point to bear in mind is that important smartphone innovations have become as rare as hens' teeth and new device launches are often no more than just an upgrade of the previous model, without being genuinely innovative[7]. But there is one segment that is growing fast: wearables[8]. Major drivers in this market are the growing interest in monitoring various aspects of health (such as exercise levels and sleeping patterns), plus the falling price of smartwatches[9].

So, how do these market trends translate into the ownership and use of media devices in Flanders? Television sets (95%), smartphones (81%) and laptops (80%) remain the most popular devices used by the Flemish. Within this top three, only the smartphone continues to make progress (rising from 78% to 81%)[10], while other devices peaked a few years ago. The adoption level of tablets has also hovered between 55% and 60% since 2014.

Smartphones owe their growth mainly to the rising popularity among the older age segments. For instance, eight out of ten 55-64 year olds now have a smartphone. Not only that, but for the first time, more than half of the over-65s have a smartphone in their bag or pocket. The reasons for not (yet) owning a smartphone are due mainly to the fact that this age group is unable to discern the benefit of a smartphone over other devices that they already own – and the cost that comes with it.

Not only is smartphone ownership rising, but these phones are also being used more intensively. In fact, one in every five smartphone users spends at least five hours a day on the device. Last year, that figure was one in eight. Nearly half of 16-24 year olds say that they use their smartphone for at least five hours a day. For some people, this intensive use can lead to a feeling of 'addiction' (see section on Attitudes). So it comes as no surprise to learn that the smartphone has become the most essential device for an increasing number of Flemings (rising from 39% in 2017 to 45% in 2018).

Digital television is still present in the majority of Flemish households (constant at 83%), but is being increasingly supplemented by a subscription to Netflix (up from 21% to 31%). As such, Flanders is approaching Holland, where 35% have access to Netflix[11]. Four years after Netflix was launched, the fear felt by Flemish media players that it would bring a wave of 'cord-cutters' has not eventuated. Netflix has grown mainly with people who have a subscription to digital television. It will definitely be interesting to continue monitoring the situation. Out of the 17% of Flemings who do not have a television connection, the reasons stated most is that they use an international platform such as Netflix to watch films and TV series (31% of the 17% of Flemings without a television connection, or 5% of the total Flemish population). The arrival of Netflix has not (yet) resulted in a dramatic fall in the number of subscriptions to digital television and for 5% of Flemings, the availability of online content is sufficient reason to stop having a subscription to digital television.

3 https://www.gartner.com/en/newsroom/press-releases/2018-01-11-gartner-says-worldwide-pc-shipments-declined-2-percent-in-4q17-and-28-percent-for-the-year
4 https://venturebeat.com/2018/11/02/idc-tablet-shipments-q3-2018/
5 http://fortune.com/2018/11/02/smartphone-shipments-sales-recession/
6 https://www.businessinsider.nl/apple-stop-disclosing-iphone-ipad-mac-unit-sales-quarter-2018-11/
7 https://www.ft.com/content/b60b28e8-1e1b-11e8-aaca-4574d7dabfb6
8 https://www.nasdaq.com/article/xiaomi-crushes-fitbit-and-apple-in-wearable-shipments-cm1065733
9 https://www.forbes.com/sites/paullamkin/2017/11/29/smartwatch-sales-to-double-in-next-5-years/
10 At first glance, this rise in ownership may appear to contradict the statement made earlier saying that sales of smartphones are declining. Nevertheless, both findings are consistent each other. It is important to remember here that a fall in sales figures does not mean that no phones are being sold any more; it just means that there were fewer than in the comparative period. This means that a fall in sales figures can dovetail perfectly with a rise in ownership. While the speed with which existing users are buying new devices may be declining (which is the case with smartphones), but at the same time there are more new users (opting for a smartphone).
11 https://www.telecompaper.com/nieuws/aantal-huishoudens-zonder-tv-abonnement-groeit-netflix-videoland-groeien--1248604

Wearables, such as smartwatches and activity trackers, are on the rise. Anyone who owns a wearable will make use of it, too. Only a small majority says that the wearable is now gathering dust in a drawer. The largest group of people who own a smartwatch or activity tracker say they use it constantly. A smart sports watch is used selectively for its intended purpose – i.e. when doing sport. Wearables are particularly popular among 25-34 year olds, with 36% owning a wearable. This is also the group where the rise over last year is the highest (+9 percentage points).

Smart speakers[12] remain unknown territory for the majority of Flemings. Google Home is the best-known smart speaker, with 38% who have already heard of them and 4% who actually own a Google Home. In total, some 8% say they own a smart speaker, which is a clear advance over the beginning of 2018, when 3% had a smart speaker according to a study by iCapps[13]. However, Google Home has also been available in Holland since last summer, which partly explains the rise. According to Deloitte, 13% of Germans now have a smart speaker at home[14], whereas the level of adoption in the US has reached 24%[15]. In Flanders, 16% of people don't yet own a smart speaker, but are interested in buying one. The figure is one in four for people under the age of 35.

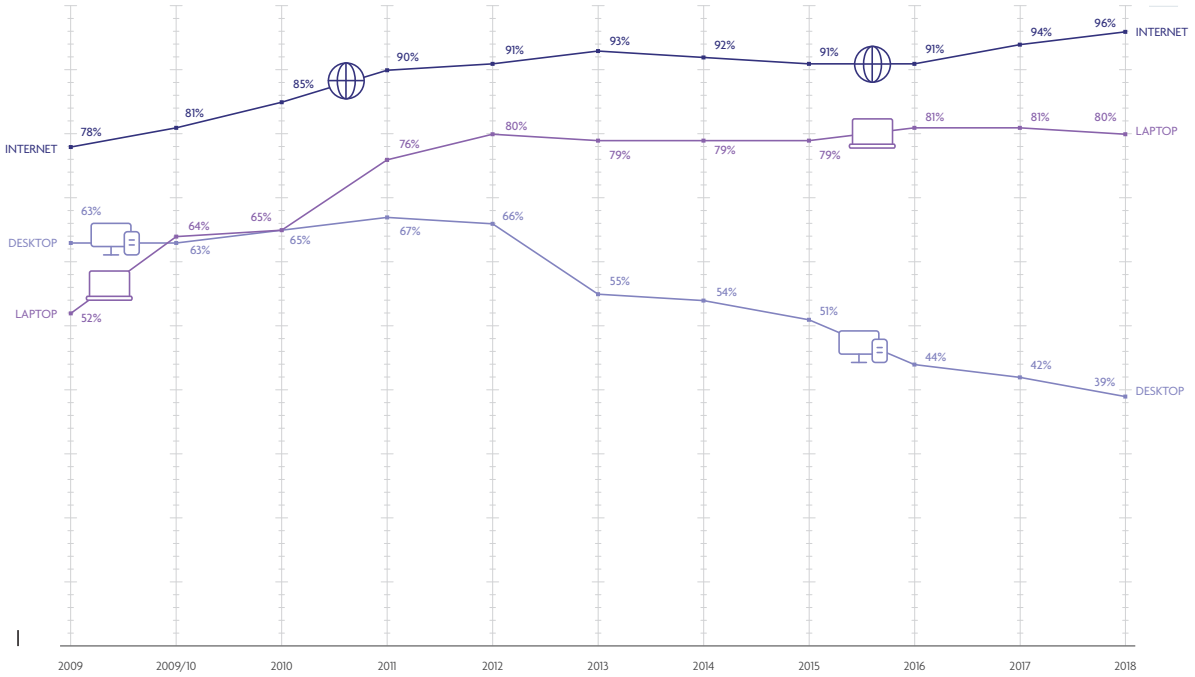
12 Smart speakers were described as follows in the questionnaire: "A smart speaker is a loudspeaker with a microphone that you operate with your voice. You can ask the smart speaker questions (e.g. the latest weather forecast, the opening hours of a store, etc.) or give it instructions (e.g. play music, operate smart lighting, make calls, send messages, set and alarm and so on). NB: a Smart Speaker is not the same as an assistant on a telephone. In this instance we mean a freestanding device and not something that is built into your smartphone."

13 https://datanews.knack.be/ict/nieuws/waarom-belgen-geen-boodschap-hebben-aan-een-ai-butler-in-huis/article-longread-956193.html

14 https://www.telecompaper.com/nieuws/smart-speakers-in-87-miljoen-duitse-huishoudens--1258593

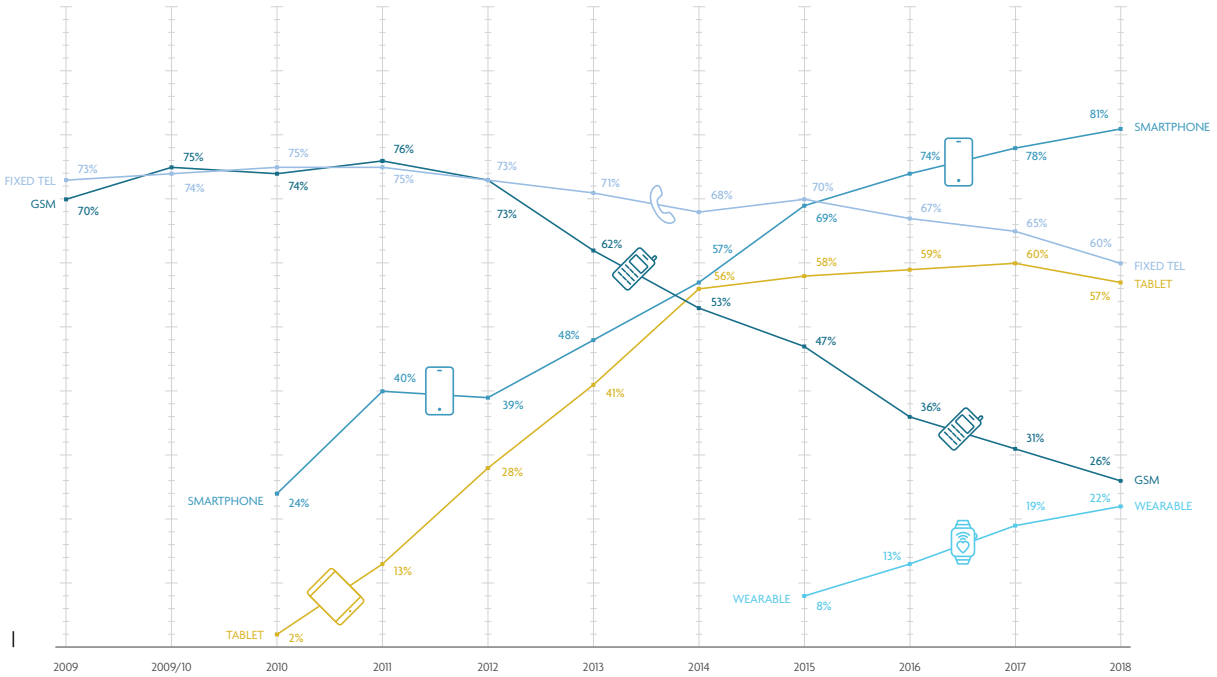
15 https://techcrunch.com/2018/09/28/nielsen-u-s-smart-speaker-adoption-grew-to-24-in-q2-2018-4-in-10-own-more-than-one/

PROPORTION OF FLEMISH PEOPLE WITH ACCESS TO INTERNET & COMPUTER IN THEIR HOUSEHOLD



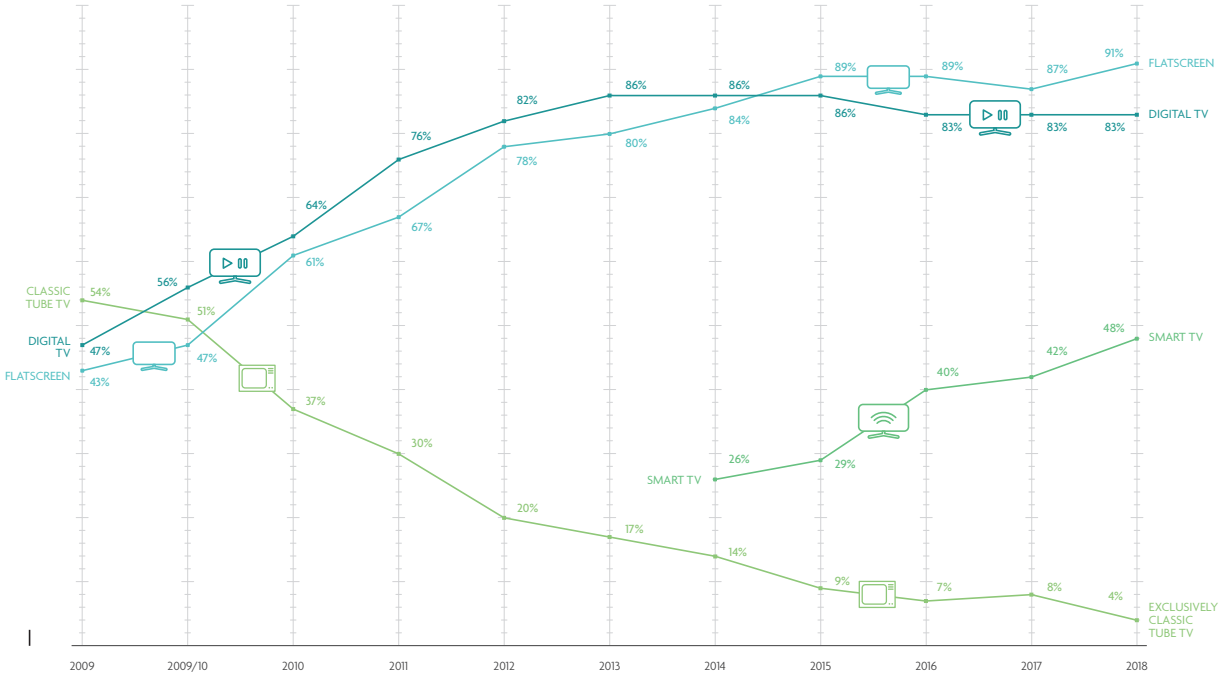
General adoption graph 1: Adoption of internet connection & computers in Flanders – 2009 to 2018 *Statistically significant change compared to the previous year, based on a chi-square test.

PROPORTION OF FLEMISH PEOPLE WITH ACCESS TO TELEPHONY & MOBILE IN THEIR HOUSEHOLD



General adoption graph 2: Adoption of telephony & mobile in Flanders – 2009 to 2018 *Statistically significant change compared to the previous year, based on a chi-square test.

PROPORTION OF FLEMISH PEOPLE WITH ACCESS TO TV SET & DIGITAL TV SUBSCRIPTION IN THEIR HOUSEHOLD



General adoption graph 3: Adoption of TV sets & digital TV subscriptions in Flanders – 2009 to 2018

PROPORTION OF FLEMISH PEOPLE WITH ACCESS TO GAME CONSOLE IN THEIR HOUSEHOLD

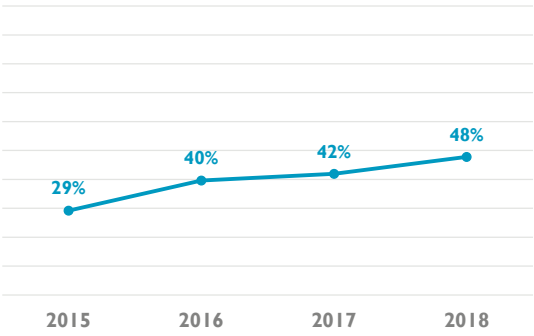
General adoption graph 4: Adoption of game consoles in Flanders – 2009 to 2018

TV OWNERSHIP

	2017	**2018**
Flatscreen TV only	79%	**89%**
Cathode ray tube TV only	8%	**4%**
Both	8%	**2%**
Total ownership of TV set	***94%***	***95%***

What type of television set(s) do you have at home?
Multiple answers possible. (Total sample N=4,547)

SMART TV OWNERSHIP



What type of television set(s) do you have at home?
Multiple answers possible. % smart tv, evolution since 2015 (Total sample, N=4.547)

REASON FOR NOT HAVING A TV SET AT HOME

	2018
I use another device to watch TV content	41%
I seldom watch TV programs	24%
A television is too expensive	8%
I watch television at someone else's place	3%
Other reason/no answer	29%

For you, what is the main reason for not having a TV set at home (any more)? Multiple answers possible. (Filter on who does not own a TV set, N=237 or 5% of sample)

TV SUBSCRIPTIONS

	2015	2016	2017	**2018**
Digital TV	86%	83%	83%	**83%**
Analog TV	17%	18%	17%	**15%**
VoD with Telenet (Play, PlayMore) or Proximus/Scarlet (Movies & Series Pass)		14%	14%	**13%**
Sports package with Telenet (Play Sports) or Proximus (Proximus Sports)		9%	7%	**7%**
Stievie	2%	1%	1%	**1%**
Netflix	12%	15%	21%	**31%**

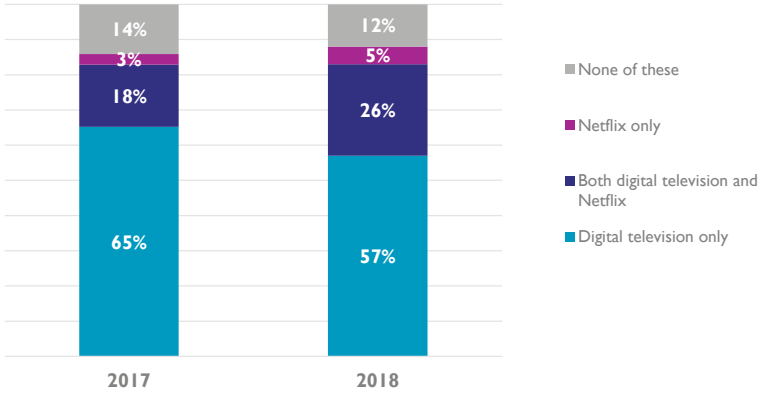
Which of the paying connections or subscriptions below do you have access to at home, even if you do not pay for it yourself (e.g. a Netflix subscription shared with a friend who lives at a different address)? (total sample N=4,547)

ACCESS TO NETFLIX - SPLIT BY AGE GROUP

		16-24	25-34	35-44	45-54	55-64	65+	*Total*
Netflix	2017	41%	36%	30%	22%	9%	2%	*21%*
	2018	**55%**	**59%**	**38%**	**30%**	**16%**	**8%**	***31%***

Which of the paying connections or subscriptions below do you have access to at home, even if you do not pay for it yourself (e.g. a Netflix subscription shared with a friend who lives at a different address)? - Crossover of Netflix with digital television (total sample N=4,547)

NETFLIX AND DIGITAL TELEVISION: OVERLAP VERSUS UNIQUE



Which of the paying connections or subscriptions below do you have access to at home, even if you do not pay for it yourself (e.g. a Netflix subscription shared with a friend who lives at a different address)? - Crossover of Netflix with digital television (total sample N=4,547)

REASON FOR HAVING NO TV SUBSCRIPTION

	2018
I use international platforms such as Netflix or YouTube to watch films, series or other forms of video	31%
I use online services to watch Flemish broadcasters (VRTnu, VTM.be, Stievie, etc.)	23%
I have no interest or need to watch television	22%
A television subscription is too expensive	16%
No time to watch television	9%
I watch television at someone else's place	2%
Other reason/no answer	15%

What for you is the main reason you do not have a TV connection at home (any longer)? Multiple answers possible. (filter on who has no digital TV connection, N=767 or 17% of sample)

COMPUTER OWNERSHIP AND INTERNET CONNECTION

	2017	2018
Laptop	81%	**80%**
Desktop	42%	**39%**
Total computer	***91%***	**92%**
Internet connection	94%	**96%**

What type of computer do you have at home? (total sample N=4,547)
Do you have an Internet connection at home? (total sample N=4,547)

REASONS FOR NOT OWNING A COMPUTER (FILTERED ON NO COMPUTER - N=315)

	2018
I have another device (e.g. tablet, smartphone) with which I can carry out most	37%
I cannot work with a computer	14%
A computer is too expensive	12%
I have no interest in computers	10%
When necessary I use a computer somewhere else (e.g. library, work, friends, etc.)	5%
I have no need to use a computer (at home)	5%
When I need to do something with a computer someone else does it for me	4%
Other reason	14%

What for you is the main reason you do not have a PC at home (desktop computer or laptop) (any more)? (filter on who does not have a computer, N=315 or 8% of sample)

REASONS FOR NOT HAVING AN INTERNET CONNECTION (FILTERED ON NO INTERNET CONNECTION - N=183)

	2018
I can't work with the Internet	22%
Internet is too expensive	21%
I have a subscription to mobile Internet (3G/4G) and that's all I need	16%
When necessary I use a computer somewhere else (e.g. library, work, friends,	11%
The Internet doesn't interest me	7%
I don't need the Internet (at home)	5%
When I need to do something with a computer someone else does it for me	3%
For privacy reasons: I don't want to leave digital traces of my life on the Internet	1%
Other reason	13%

What for you is the main reason why you don't have an Internet connection at home (any more)? (filter on who doesn't have an Internet connection, N=183 or 4% of sample)

TELEPHONE OWNERSHIP

	Mobile telephone (mobile/ smartphone)	Landline telephone
2009	92%	73%
2010	97%	75%
2011	97%	75%
2012	95%	73%
2013	96%	71%
2014	96%	68%
2015	97%	70%
2016	95%	67%
2017	97%	65%
2018	**96%**	**60%**

How often do you use the devices below at home? - % not indicating 'I don't have (any more)' (total sample N=4,547)

MOBILE DEVICES OWNERSHIP

	Smartphone	Mobile	Tablet	E-reader
2009		70%		
2010	24%	74%	2%	
2011	40%	76%	13%	
2012	39%	73%	28%	
2013	48%	62%	41%	
2014	57%	53%	56%	
2015	69%	47%	58%	
2016	74%	36%	59%	
2017	78%	31%	60%	
2018	**81%**	**26%**	**57%**	**14%**

How often do you use the devices below at home? - % not indicating 'I don't have (any more)' (total sample N=4,547)

OWNERSHIP OF SMARTPHONE VERSUS MOBILE - FILTER ON 65+

	Smartphone	Mobile
2014	25%	72%
2015	33%	72%
2016	35%	59%
2017	48%	53%
2018	**52%**	**50%**

How often do you use the devices below at home? - % not indicating 'I don't have (any more)' (filter on age group 65+, N=1,050 or 23% of sample)

OWNERSHIP OF MOBILE DEVICES - SPLIT BY AGE GROUP

		16-24	25-34	35-44	45-54	55-64	65+	*Total*
Mobile	2017	28%	17%	15%	26%	34%	53%	*31%*
	2018	**19%**	**11%**	**14%**	**19%**	**27%**	**50%**	**26%**
Smartphone	2017	95%	92%	94%	84%	75%	48%	*78%*
	2018	**95%**	**95%**	**96%**	**87%**	**80%**	**52%**	***81%***
Tablet	2017	72%	63%	79%	68%	51%	42%	*60%*
	2018	**48%**	**58%**	**68%**	**63%**	**54%**	**52%**	**57%**
E-reader	2017							
	2018	**10%**	**16%**	**19%**	**16%**	**14%**	**10%**	***14%***

How often do you use the devices below at home? - % not indicating 'I don't have (any more)' - Split by age group (total sample N=4,547)

FREQUENCY OF USING LANDLINE TELEPHONE AND MOBILE DEVICES

I don't have one	Seldom or never	Less than weekly	Less than daily	Less than 1 hour a day	At least 1 hour a day
40%	17%	13%	18%	10%	2%
75%	4%	3%	6%	8%	4%
19%	2%	0%	3%	22%	53%
43%	8%	6%	9%	13%	20%
86%	4%	3%	3%	2%	2%

How often do you use the devices below at home? (total sample N=4,547)

DETAIL OF AT LEAST 1 HOUR PER DAY SMARTPHONE VERSUS TABLET

	I don't have one	Less than 1 hour a day	1 hour	2 hours	3 hours	4 hours	5 hours	6 hours	More than 6 hours
Smartphone	19%	28%	3%	16%	11%	7%	5%	3%	8%
Tablet	43%	37%	2%	9%	4%	3%	2%	1%	1%

How long, on average, do you spend per day on these devices? (total sample N=4,547)

AT LEAST 5 HOURS SMARTPHONE PER DAY - SPLIT BY AGE, GENDER AND EDUCATION

	At least 5 hours a day smartphone	
	2017	2018
TOTAL	13%	**20%**
AGE		
16-24	30%	**48%**
25-34	20%	**29%**
35-44	14%	**19%**
45-54	9%	**15%**
55-64	5%	**6%**
65+	2%	**4%**
GENDER		
M	12%	**18%**
F	15%	**22%**
EDUCATION		
No degree or primary education	14%	**18%**
Lower secondary	20%	**28%**
Higher secondary	15%	**25%**
Bachelor's degree	10%	**16%**
Master's degree	6%	**8%**
DIPLOMA - FILTER ON 25+ *		
No degree or primary education	*12%*	***13%***
Lower secondary	*12%*	***13%***
Higher secondary	*11%*	***20%***
Bachelor's degree	*10%*	***15%***
Master's degree	*6%*	***7%***

How long, on average, do you spend per day on these devices? - At least 5 hours a day (filter on ownership of smartphone, N=3,686 or 81% of sample)
*Clean effect of diploma from age effects (in 'lower secondary diploma' there are also 16-18-year-olds who are still at secondary school, and 'higher secondary diploma' also includes students)

REASONS FOR NOT OWNING A SMARTPHONE (FILTER ON NO SMARTPHONE - N=860)

	2018
An ordinary mobile is all I need	41%
I have another device for using the Internet (e.g. computer, tablet)	31%
A smartphone costs too much	26%
So long as my mobile still works, I see no reason for buying a smartphone	26%
I don't want to be available everywhere and all the time	19%
I can't work with a smartphone	17%
I don't see the value in a smartphone	16%
I'm afraid of jeopardizing my privacy	4%
If I need one, I use someone else's smartphone (e.g. partner, friends)	4%
I'm afraid a smartphone is too addictive for me	4%
I'm concerned about my health (e.g. hearing problems, radiation hazard)	2%
I seldom use my smartphone	1%
Other reason / no answer	13%

What for you are the main reasons why you don't have a smartphone (any more)? (filter by who doesn't have a smartphone, N=860 or 19% of sample)

OPERATING SYSTEM SMARTPHONE - FILTER BY SMARTPHONE OWNERSHIP (N = 3,686)

	2015	2016	2017	2018
Android	53%	54%	56%	**60%**
Apple iOS	32%	37%	34%	**34%**
Windows Phone	8%	5%	5%	**3%**
Don't know/other	7%	4%	4%	**3%**

What operating system does the smartphone you use most have? (filter by smartphone ownership, N=3,686, or 81% of sample)

GAMES CONSOLE OWNERSHIP

	2017	2018
A games console connected to the TV	32%	**32%**
A portable games console	15%	**11%**
A hybrid games console (e.g. Nintendo Switch)	2%	**3%**
Total ownership of games console	***36%***	***34%***

What games consoles do you have at home? Multiple answers possible. (total sample N=4,547)

OWNERSHIP OF WEARABLES

	2015	2016	2017	2018
Smart sports watch	4%	6%	7%	**6%**
Smart wristband/activity tracker	2%	4%	6%	**8%**
Smartwatch	2%	4%	6%	**8%**
Footpod/smart clothes	1%	1%	1%	**1%**
Total ownership of wearables	***8%***	***13%***	***19%***	***22%***

Do you have one of the 'wearables' below? Multiple answers possible. (total sample N=4,547)

OWNERSHIP OF WEARABLES - SPLIT BY AGE GROUP

	2017	2018
16-24	22%	**18%**
25-34	27%	**36%**
35-44	28%	**30%**
45-54	21%	**24%**
55-64	15%	**18%**
65+	8%	**10%**

Do you have one of the 'wearables' below? - Split by age group (total sample N=4,547)

USE OF WEARABLES

	While sleeping	While doing sport	When moving about	At work	Constantly	(Virtually) never
Smartwatch (N=353)	17%	35%	31%	30%	60%	14%
Smart sports watch (N=288)	18%	66%	18%	16%	44%	5%
Smart wristband/activity tracker (N=380)	27%	35%	28%	26%	64%	11%

You say that you own one of the wearable(s) below. When do you use it? (filter by ownership of wearable)

SMART SPEAKERS - KNOWLEDGE, INTEREST AND OWNERSHIP

	I don't know	I know but I don't want	I'd like but I haven't got yet	Have already
Apple Homepod	68%	25%	7%	1%
Amazon Echo	73%	23%	4%	1%
Google Home	62%	26%	8%	4%
Xiaomi MI AI Speaker	85%	13%	2%	0%
Harman Kardon Invoke	85%	12%	2%	0%
Sonos One	75%	17%	6%	3%

Which of the smart speakers below do you know about or already have at home? (total sample N=4,547)

SMART SPEAKERS: POTENTIAL (INTERESTED IN BUT NOT YET OWNED) VERSUS OWNERSHIP

	Potential	Own
16-24	25%	13%
25-34	27%	11%
35-44	19%	9%
45-54	18%	6%
55-64	9%	6%
65+	5%	5%
Total	***16%***	***8%***

Which of the smart speakers below do you know about or already have at home? ['potential' = 'I'd like but haven't got on yet' on at least 1 brand of smart speaker; 'own' = 'I already have' on at least 1 brand of smart speaker] (total sample N=4,547)

WHAT TECHNOLOGY WOULD YOU MISS THE LEAST FOR PERSONAL USE?

	2015	2016	2017	2018
Smartphone	26%	35%	39%	**45%**
Computer	28%	25%	25%	**29%**
Tablet	6%	6%	6%	**6%**
Mobile	8%	8%	8%	**6%**
Television set	29%	17%	13%	**5%**
Smart TV	2%	2%	4%	**4%**
Games console	1%	1%	2%	**3%**
Other	0%	7%	3%	**2%**

What technology would you miss the least for personal use? (total sample N=4,547)

CHAPTER 2

VIDEO, AUDIO & GAMING

Online video and video on the rise

VIEW LIVE TV DAILY

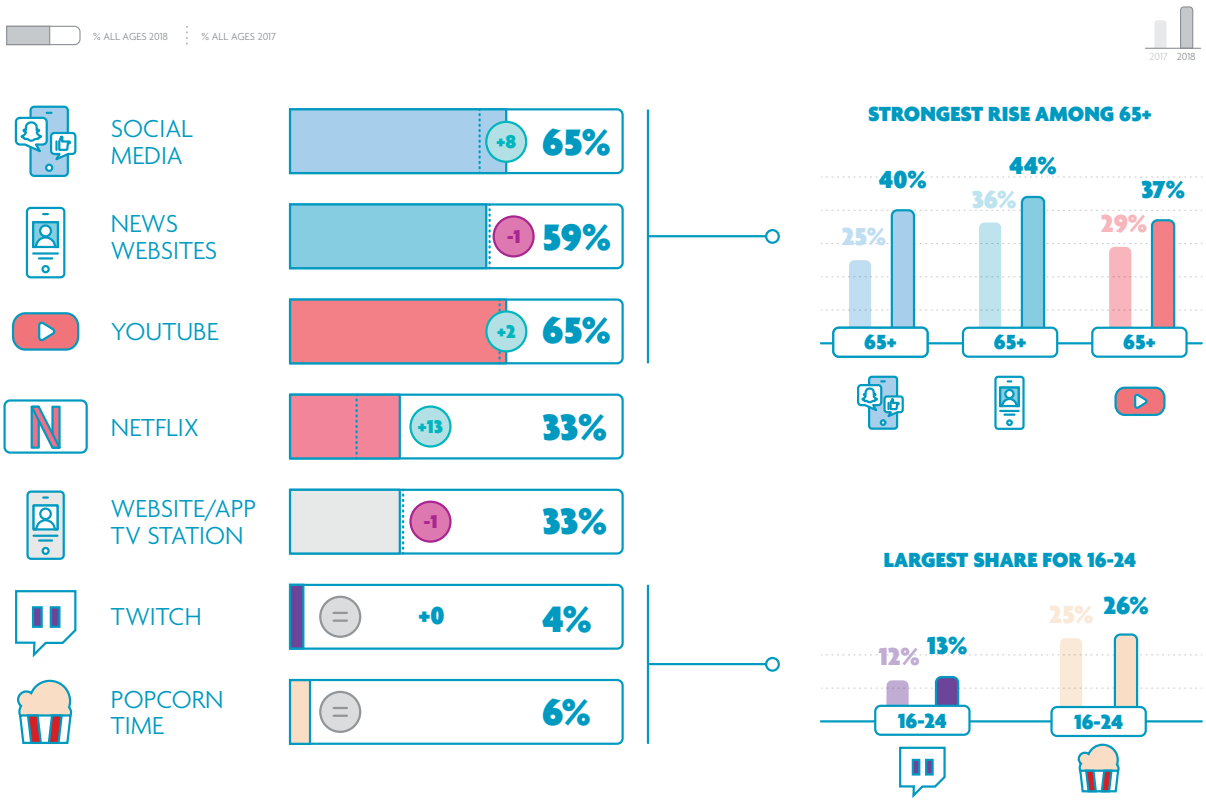
Remains stable, but decline among younger age groups

48%
WATCH LIVE TB DAILY

-2
COMPARED WITH 2017

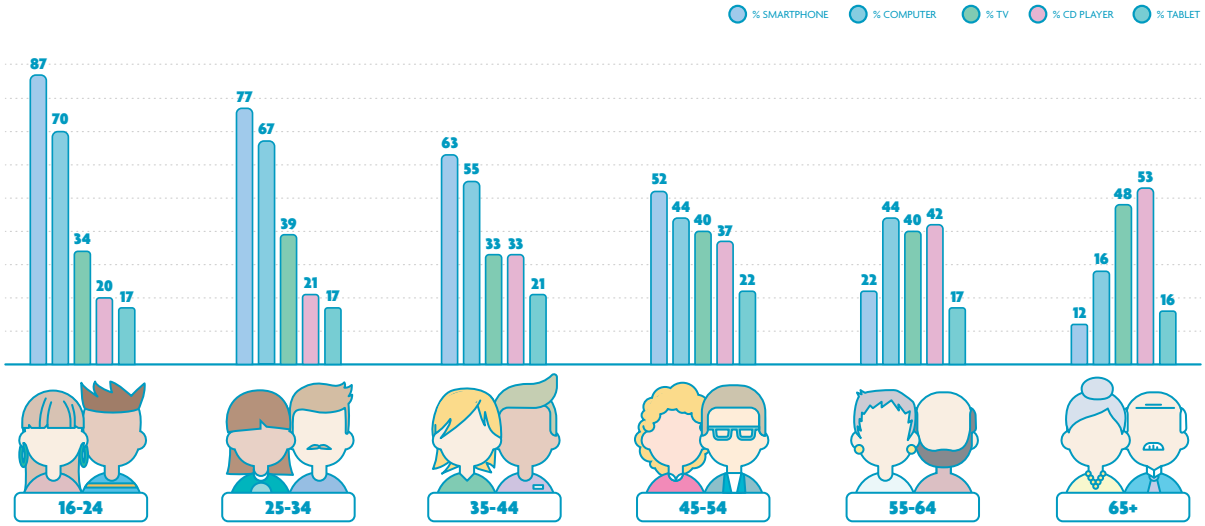
ONLINE VIDEO

Clear increase among 65+



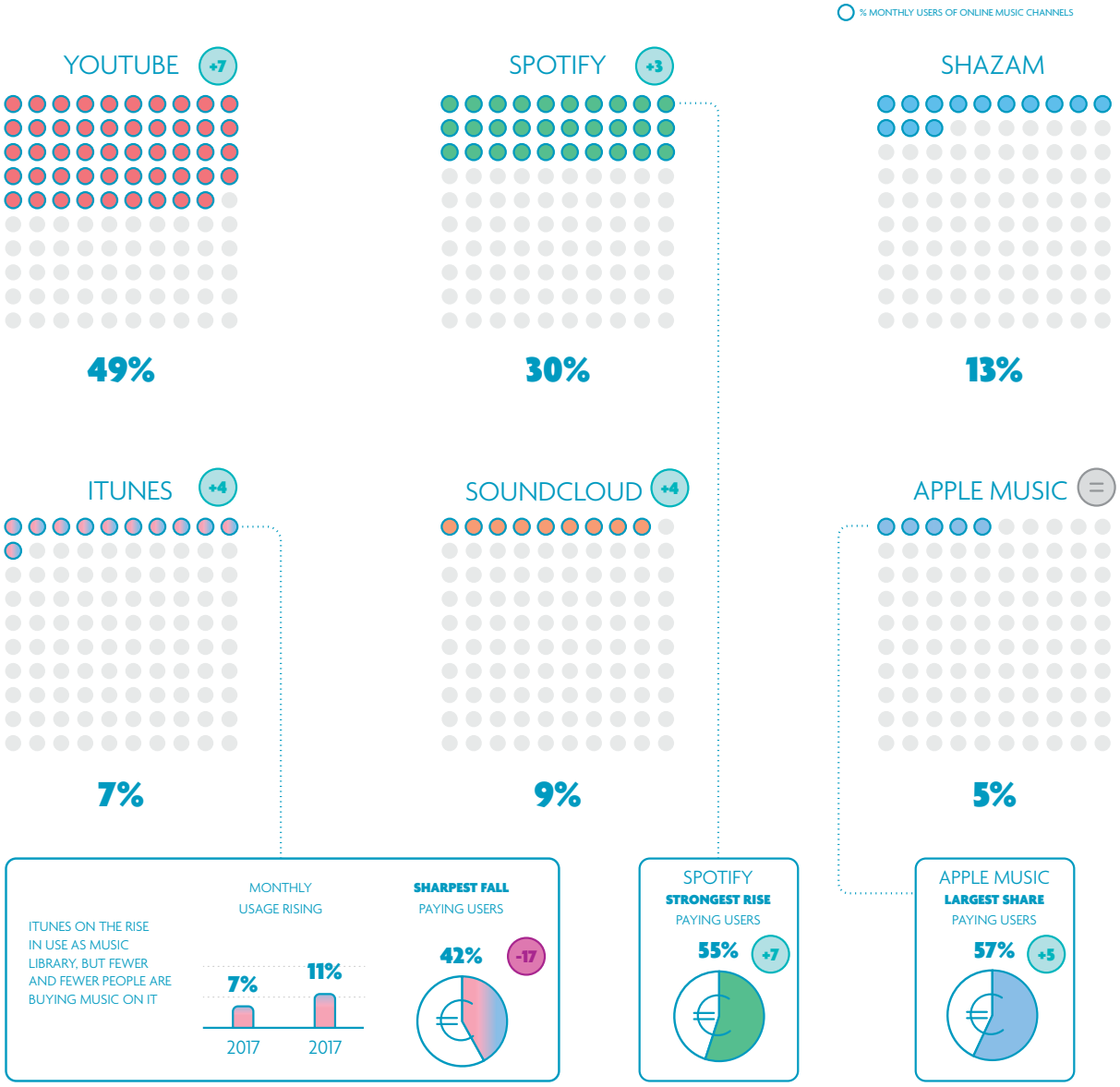
MUSIC DEVICES

Younger people listen to music more via PC and smartphone, older people opt for CD and TV



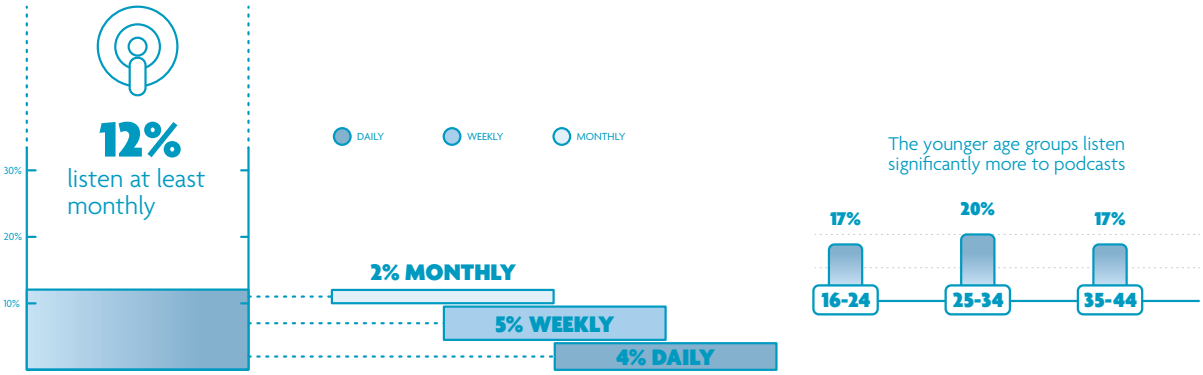
ONLINE MUSIC

YouTube remains the most popular music platform



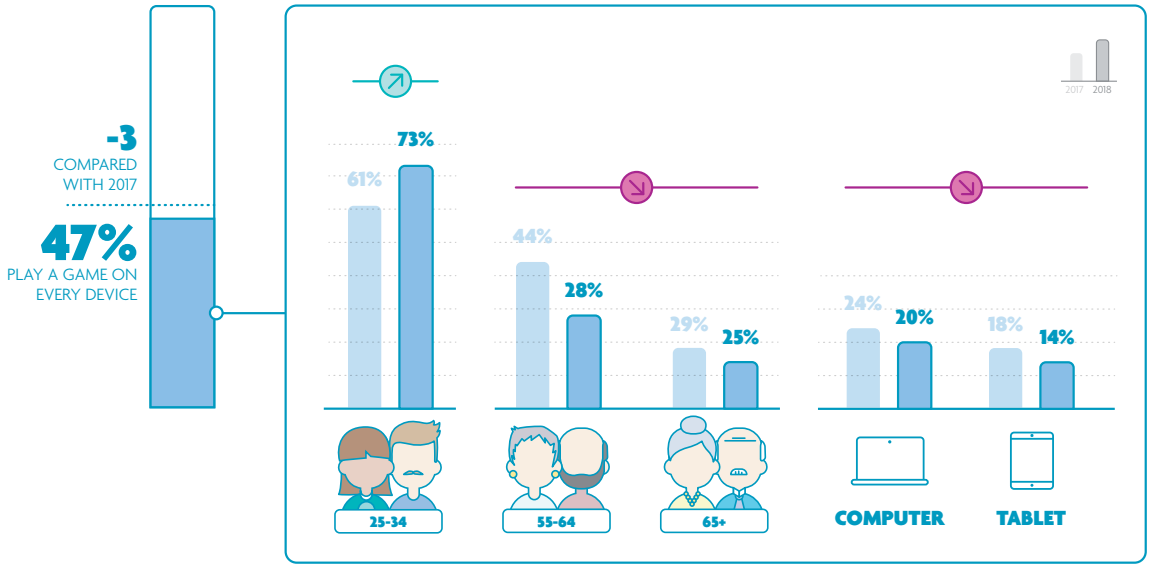
PODCASTS

Strikingly more younger people listen regularly



GAMING

Monthly gaming down slightly



VIDEO, AUDIO & GAMING

In recent years, watching television has gone through something of a transition in which linear TV has been challenged increasingly by alternatives, enabling viewers to decide actively what they want to watch, instead of simply depending on the broadcast TV program schedule. This transition has been a gradual evolution and not a disruptive revolution. Watching linear television remains part of the daily routine for over half of the people in Flanders. However, we are seeing an increasingly clear gap between viewers under the age of 45 and those who are older. With over-45s, the proportion who watch television live on a daily basis was stable in relation to the previous year, while there was a significant fall in viewers younger than 45. A quarter of 16-34 year olds still watch linear television every day, while that figure is more than one-third for viewers aged 35-44. As can be seen from the section on Devices and Connections, the majority of Flemings see digital television and services such as Netflix as compatible platforms.

Social media remain the leading day-to-day ways of accessing online video, showing clear growth over the previous year. News websites are also still popular platforms for online video, although these have stagnated compared with 2017. In fact, viewing only video content on news websites actually fell for 16-24 year olds. Given the dwindling interest for news in general within this target group, this comes as no surprise (see section on News). On a monthly basis, just as many Flemings watch video content via the online of a Flemish broadcaster (such as the VTM app of the VRTnu website) or provider (for example the Yelo Play app from Telenet) as they do via Netflix (both 33%). However, there is a clear difference in terms of age: for the under-35s, Netflix scores higher than the online services of Flemish broadcasters and providers, while among viewers aged over 45, more people watch via an online service from Flemish broadcasters and providers than via Netflix. For 35-44 year olds, there are equal numbers of Netflix users and viewers of online services from Flemish broadcasters and providers. Platforms such as Twitch and Popcorn Time have a substantial group of users in the 16-24 age group (13% and 26% respectively), although they have limited reach outside this age category.

Radio remains a popular medium in Flanders. Traditional sets (ones that receive FM/AM) and car radios are still the most popular devices for listening to radio stations. Listening via digital devices (computers, smartphones, tablets and DAB+) rose compared with the previous year. The figures from imec.digimeter are in line with the benchmark survey for "Digital Radio" conducted by Ipsos for the Flemish Government[16]. Most people in each age group continue to listen on an FM receiver, although we are seeing a clear trend among listeners under the age of 35 toward more online radio and less via FM.

Computers and smartphones are the most popular ways of accessing music. Only among the over-65s are CD-players and televisions used more to listen to music. YouTube and Spotify are still the most-used online music platforms, continuing to grow in comparison with 2017. Spotify is also able to convince increasing numbers of users to pay for the service: last year, for the first time, more than half of Spotify users had an account with Spotify (55%) for which they paid. This places Flanders in line with countries such as the Netherlands (53%)[17]. Apple Music, on the other hand, continues to depend on 5% of monthly users.

Most Flemings are still not familiar with podcasts. Three out of ten have never even heard of podcasts, while four out of ten know what they are, but have never listened to them. 12% listen at least once a month, while it is a weekly habit for 7%. The highest user share is among 25-34 year olds, where 20% listen to podcasts monthly and 14% weekly. One interesting point is that 27% of people aged 16-24 had never heard of podcasts, a figure that is significantly higher for the 25-34 (12%), 35-44 (16%) and 45-54 (22%) age brackets.

Playing digital games is a monthly activity of half of Flemings. However, there is a clear age gap here. Seven out of ten people under the age of 35 play games monthly, with a clear rise for 25-34 year olds (mainly on a fixed console, computer or smartphone). The figure decreases again for people over 55 to fewer than three in ten, where the decline is mainly for gaming on computers and tablets.

16 https://www.dabplus.be/wp-content/uploads/sites/5/2018/11/Ipsos_DigitaliseringRadio_Presentatie_v1.pdf, p27
17 https://www.telecompaper.com/nieuws/nederland-is-een-goede-markt-voor-streaming-muziekdiensten--1253663

FREQUENCY OF WATCHING TV

	Ever				Monthly				Daily			
	2015	2016	2017	2018	2015	2016	2017	2018	2015	2016	2017	2018
Live/linear	94%	94%	87%	**94%**	82%	83%	73%	**75%**	60%	57%	50%	**48%**
Delayed watching	78%	81%	75%	**85%**	69%	74%	65%	**72%**	30%	29%	27%	**30%**
Rent a film or series (per item) via digital television		44%	38%	**42%**		14%	13%	**15%**		1%	1%	**3%**

How often do you watch TV programs, series or films via (digital) television? (total sample, N=4,547)

WATCHING LIVE/LINEAR TV DAILY - SPLIT BY AGE GROUP

	2017	2018
16-24	25%	**22%**
25-34	29%	**26%**
35-44	41%	**35%**
45-54	48%	**48%**
55-64	62%	**60%**
65+	74%	**75%**
Total	***50%***	***48%***

How often do you watch TV programs, series or films via (digital) television? - % daily live/linear - Split by age group (total sample, N=4,547)

FREQUENCY OF ONLINE VIDEO

	Ever			Monthly			Daily		
	2016	2017	2018	2016	2017	2018	2016	2017	2018
Social media	65%	67%	**76%**	56%	57%	**65%**	35%	38%	**45%**
News websites	70%	72%	**75%**	58%	60%	**59%**	28%	30%	**29%**
YouTube	80%	81%	**88%**	65%	63%	**65%**	22%	21%	**26%**
Netflix	18%	22%	**39%**	17%	20%	**33%**	6%	8%	**13%**
Website or app from a TV broadcaster or provider	54%	54%	**56%**	32%	34%	**33%**	9%	10%	**10%**
Stievie Free	10%	9%	**9%**	4%	5%	**4%**	1%	1%	**1%**
Torrent sites	15%	13%	**14%**	10%	8%	**8%**	1%	2%	**1%**
Twitch		8%	**7%**		4%	**4%**		1%	**1%**
Popcorn Time	11%	9%	**11%**	6%	6%	**6%**	1%	1%	**1%**
Vimeo	26%	22%	**23%**	11%	9%	**8%**	1%	1%	**1%**
Stremio	4%	2%	**2%**	2%	2%	**1%**	0%	0%	**0%**

How often do you watch video via the online channels below? (total sample N=4,547)

MONTHLY VIDEO VIA ONLINE CHANNELS - SPLIT BY AGE

		16-24	25-34	35-44	45-54	55-64	65+
Social media	2017	86%	79%	76%	60%	46%	25%
	2018	**88%**	**81%**	**74%**	**68%**	**51%**	**40%**
News websites	2017	66%	69%	75%	63%	63%	36%
	2018	**60%**	**70%**	**68%**	**62%**	**54%**	**44%**
YouTube	2017	93%	85%	81%	67%	52%	29%
	2018	**94%**	**86%**	**79%**	**65%**	**50%**	**37%**
Netflix	2017	42%	36%	31%	19%	7%	2%
	2018	**59%**	**63%**	**40%**	**29%**	**16%**	**8%**
Website or app from a	2017	47%	40%	42%	37%	32%	18%
TV broadcaster or	**2018**	**42%**	**37%**	**39%**	**35%**	**27%**	**24%**
Stievie Free	2017	7%	6%	7%	5%	3%	3%
	2018	**5%**	**3%**	**5%**	**4%**	**5%**	**2%**
Torrent sites	2017	22%	18%	10%	4%	1%	1%
	2018	**16%**	**19%**	**10%**	**4%**	**2%**	**1%**
Twitch	2017	12%	7%	7%	1%	1%	1%
	2018	**13%**	**9%**	**4%**	**1%**	**0%**	**0%**
Popcorn Time	2017	25%	7%	6%	4%	1%	0%
	2018	**26%**	**9%**	**4%**	**2%**	**1%**	**0%**
Vimeo	2017	8%	15%	17%	10%	7%	1%
	2018	**7%**	**7%**	**13%**	**13%**	**6%**	**1%**
Stremio	2017	6%	3%	1%	1%	0%	0%
	2018	**3%**	**2%**	**1%**	**1%**	**0%**	**0%**

How often do you watch video via the online channels below? -% at least monthly - Split by age group (total sample N=4,547)

DEVICES FOR LISTENING TO THE RADIO ON A MONTHLY BASIS - SPLIT BY AGE GROUP

		16-24	25-34	35-44	45-54	55-64	65+	*Total*
Radio set (FM/AM	2017	54%	55%	57%	66%	70%	70%	*63%*
receiver)	**2018**	**51%**	**49%**	**56%**	**63%**	**69%**	**77%**	**63%**
Computer	2017	21%	24%	26%	26%	18%	10%	*20%*
	2018	**28%**	**31%**	**30%**	**31%**	**25%**	**20%**	**27%**
Smartphone	2017	22%	20%	29%	19%	12%	5%	*16%*
	2018	**39%**	**35%**	**34%**	**26%**	**15%**	**13%**	**25%**
Tablet	2017	4%	7%	10%	12%	7%	4%	*7%*
	2018	**10%**	**8%**	**12%**	**12%**	**11%**	**10%**	***11%***
Car radio	2017	48%	53%	59%	51%	45%	33%	*47%*
	2018	**35%**	**50%**	**46%**	**48%**	**47%**	**17%**	**39%**
DAB or DAB+	2017	4%	6%	8%	8%	4%	4%	*5%*
	2018	**6%**	**7%**	**11%**	**12%**	**12%**	**10%**	***10%***
TV set	2017	23%	23%	27%	23%	25%	18%	*23%*
	2018	**22%**	**32%**	**27%**	**32%**	**30%**	**24%**	**27%**
Audio streamer such	2017							
as Sonos	**2018**	**4%**	**7%**	**9%**	**8%**	**5%**	**3%**	**6%**
Smart speaker	2017							
	2018	**2%**	**3%**	**2%**	**1%**	**1%**	**1%**	**2%**
None of the above	2017							
	2018	**15%**	**11%**	**8%**	**8%**	**6%**	**8%**	**9%**

Via what devices do you listen to the radio at least once a month? Here we are specific about radio broadcasters and not about listening to music (e.g. via Spotify/ iTunes). - Split by age group (total sample N=4,547)

DEVICES FOR LISTENING TO MUSIC ON A MONTHLY BASIS - SPLIT BY AGE GROUP

	16-24	25-34	35-44	45-54	55-64	65+	*Total*
Computer	70%	67%	55%	52%	44%	28%	***50%***
Smartphone	87%	77%	63%	44%	22%	12%	***47%***
Television	34%	39%	33%	40%	40%	48%	***40%***
CD player	20%	21%	33%	37%	42%	53%	***36%***
Tablet	17%	18%	21%	22%	17%	16%	***18%***
Record player	11%	10%	9%	11%	9%	14%	***11%***
Audio system such as sonos	7%	9%	11%	11%	5%	4%	***8%***
Smart speaker	3%	3%	2%	2%	1%	1%	***2%***
None of the above	2%	4%	7%	10%	16%	20%	***11%***

Via what sources do you listen to music at least once a month? - Split by age group (N=4,547)

ONLINE MUSIC ON A MONTHLY BASIS

	2016	2017	2018
YouTube	41%	42%	**49%**
Spotify	25%	27%	**30%**
Shazam	8%	9%	**13%**
iTunes	14%	7%	**11%**
Soundcloud	7%	6%	**9%**
Google Play Music	3%	4%	**7%**
Apple Music	5%	5%	**5%**
TuneIn Radio	2%	2%	**3%**
Deezer	1%	2%	**3%**

Via what sources have you streamed or looked for music in the past month? (total sample N=4,547)

ONLINE MUSIC ON A MONTHLY BASIS - SPLIT BY AGE GROUP

		16-24	25-34	35-44	45-54	55-64	65+	*Total*
YouTube	2017	80%	69%	57%	39%	22%	13%	42%
	2018	**83%**	**76%**	**60%**	**45%**	**36%**	**18%**	***49%***
Spotify	2017	59%	45%	42%	25%	10%	4%	27%
	2018	**56%**	**51%**	**39%**	**30%**	**16%**	**6%**	***30%***
Shazam	2017	22%	14%	9%	10%	4%	0%	9%
	2018	**28%**	**23%**	**16%**	**11%**	**6%**	**2%**	***13%***
iTunes	2017	10%	7%	8%	10%	4%	3%	7%
	2018	**14%**	**11%**	**15%**	**13%**	**8%**	**6%**	***11%***
Soundcloud	2017	16%	12%	8%	6%	1%	0%	6%
	2018	**21%**	**16%**	**12%**	**7%**	**2%**	**1%**	**9%**
Google Play Music	2017	7%	6%	4%	4%	2%	1%	4%
	2018	**13%**	**10%**	**9%**	**6%**	**3%**	**3%**	**7%**
Apple Music	2017	12%	6%	6%	6%	4%	1%	5%
	2018	**12%**	**6%**	**5%**	**5%**	**2%**	**1%**	**5%**
TuneIn Radio	2017	1%	2%	4%	2%	1%	0%	2%
	2018	**2%**	**5%**	**4%**	**4%**	**2%**	**2%**	**3%**
Deezer	2017	3%	3%	3%	2%	1%	0%	2%
	2018	**4%**	**3%**	**5%**	**3%**	**2%**	**1%**	**3%**

Via what sources have you streamed or looked for music in the past month? - Split by age group (total sample N=4,547)

SPLIT OF PAYING VERSUS FREE USE OF SERVICE

	Paying	Free	Total	*Relative % paying*	*Relative % paying 2017*
YouTube		49%	49%		
Spotify	17%	14%	30%	*55%*	*48%*
Shazam	0%	12%	13%	*2%*	
iTunes	5%	6%	11%	*42%*	*59%*
Soundcloud		9%	9%		
Google Play Music	2%	5%	7%	*29%*	
Apple Music	3%	2%	5%	*57%*	*52%*
TuneIn Radio	0%	3%	3%	*3%*	
Deezer	1%	2%	3%	*37%*	

In the past year, for which of these sources have you had a paying subscription (for yourself or shared with someone else) or have you bought music? (total sample N=4,547)

FREQUENCY OF LISTENING TO PODCASTS

	16-24	25-34	35-44	45-54	55-64	65+	*Total*
I don't know	27%	12%	16%	22%	38%	51%	**29%**
Never	36%	44%	38%	46%	39%	38%	**40%**
Seldom	21%	24%	28%	21%	16%	9%	**19%**
Monthly	7%	6%	6%	5%	3%	1%	**4%**
Weekly	7%	9%	7%	5%	3%	1%	**5%**
Daily	2%	4%	4%	1%	1%	1%	**2%**
At least monthly	*17%*	*20%*	*17%*	*11%*	*7%*	*3%*	**12%**
At least weekly	*9%*	*14%*	*11%*	*6%*	*4%*	*2%*	**7%**

How often do you listen to podcasts? (total sample N=4,547)

PLAYED DIGITAL GAME IN THE PAST MONTH - SPLIT BY AGE

		16-24	25-34	35-44	45-54	55-64	65+	*Total*
Games console connected to TV ("fixed console")	2017	37%	19%	22%	7%	6%	1%	*13%*
	2018	**42%**	**31%**	**20%**	**11%**	**3%**	**1%**	***16%***
Portable games console	2017	11%	5%	5%	1%	3%	1%	*4%*
	2018	**9%**	**6%**	**5%**	**1%**	**0%**	**0%**	***3%***
Hybrid games console (both connectable to the TV, as well as usable as a portable console)	2017	3%	2%	1%	1%	1%	0%	*1%*
	2018	**4%**	**4%**	**3%**	**0%**	**0%**	**0%**	***2%***
Computer	2017	40%	28%	21%	18%	23%	17%	*24%*
	2018	**38%**	**34%**	**18%**	**17%**	**11%**	**11%**	***20%***
Smartphone/mobile	2017	62%	42%	41%	28%	16%	6%	29%
	2018	**55%**	**53%**	**33%**	**23%**	**14%**	**5%**	***28%***
Tablet	2017	21%	15%	27%	17%	18%	14%	*18%*
	2018	**12%**	**16%**	**18%**	**16%**	**11%**	**12%**	***14%***
Any other device	2017	79%	61%	58%	45%	44%	29%	*50%*
	2018	**78%**	**73%**	**56%**	**43%**	**28%**	**25%**	***47%***

Via what platforms have you played a video game in the past month? Multiple answers are possible. (total sample N=4,547)

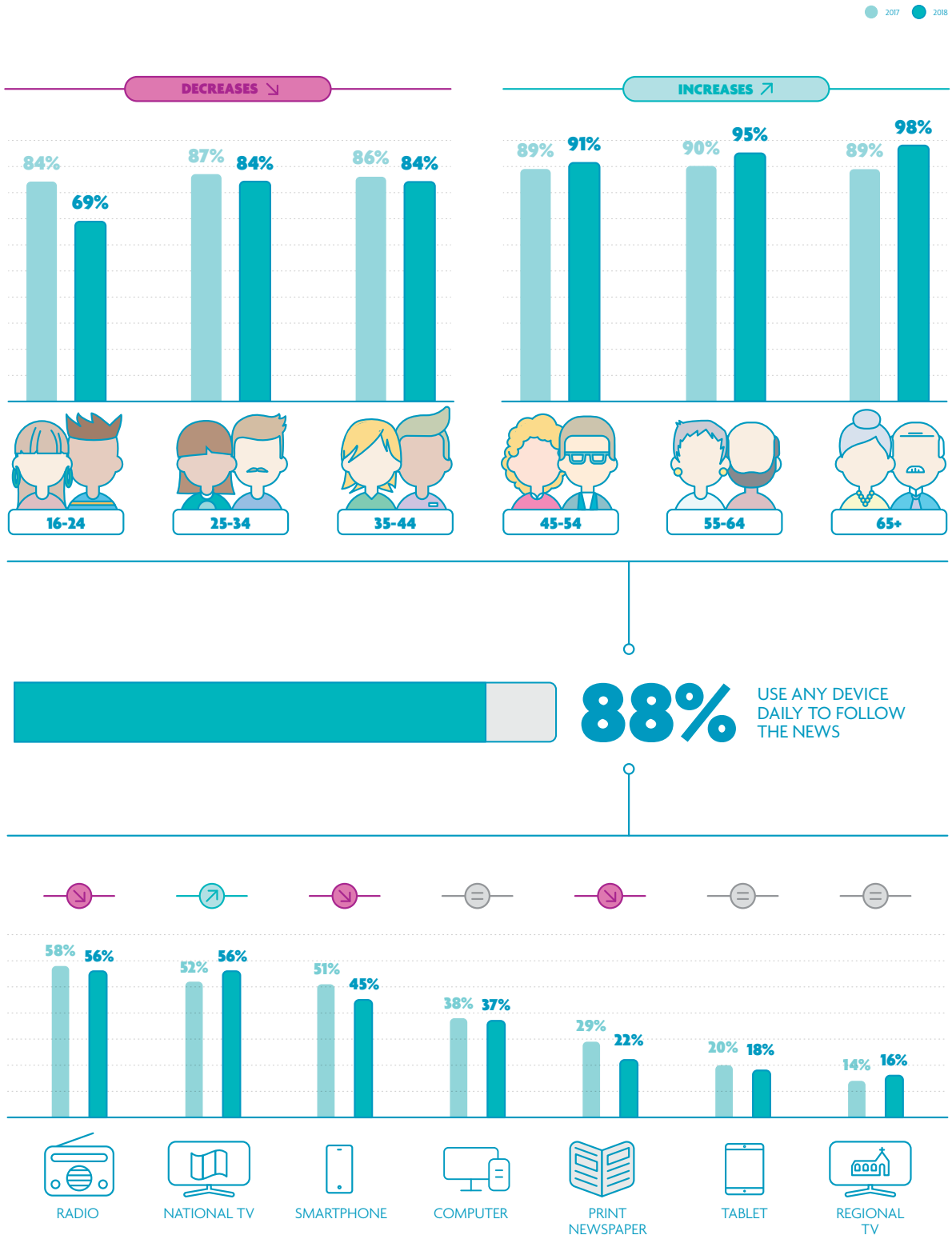
CHAPTER 3

NEWS

News sources and attitudes differ sharply be age category

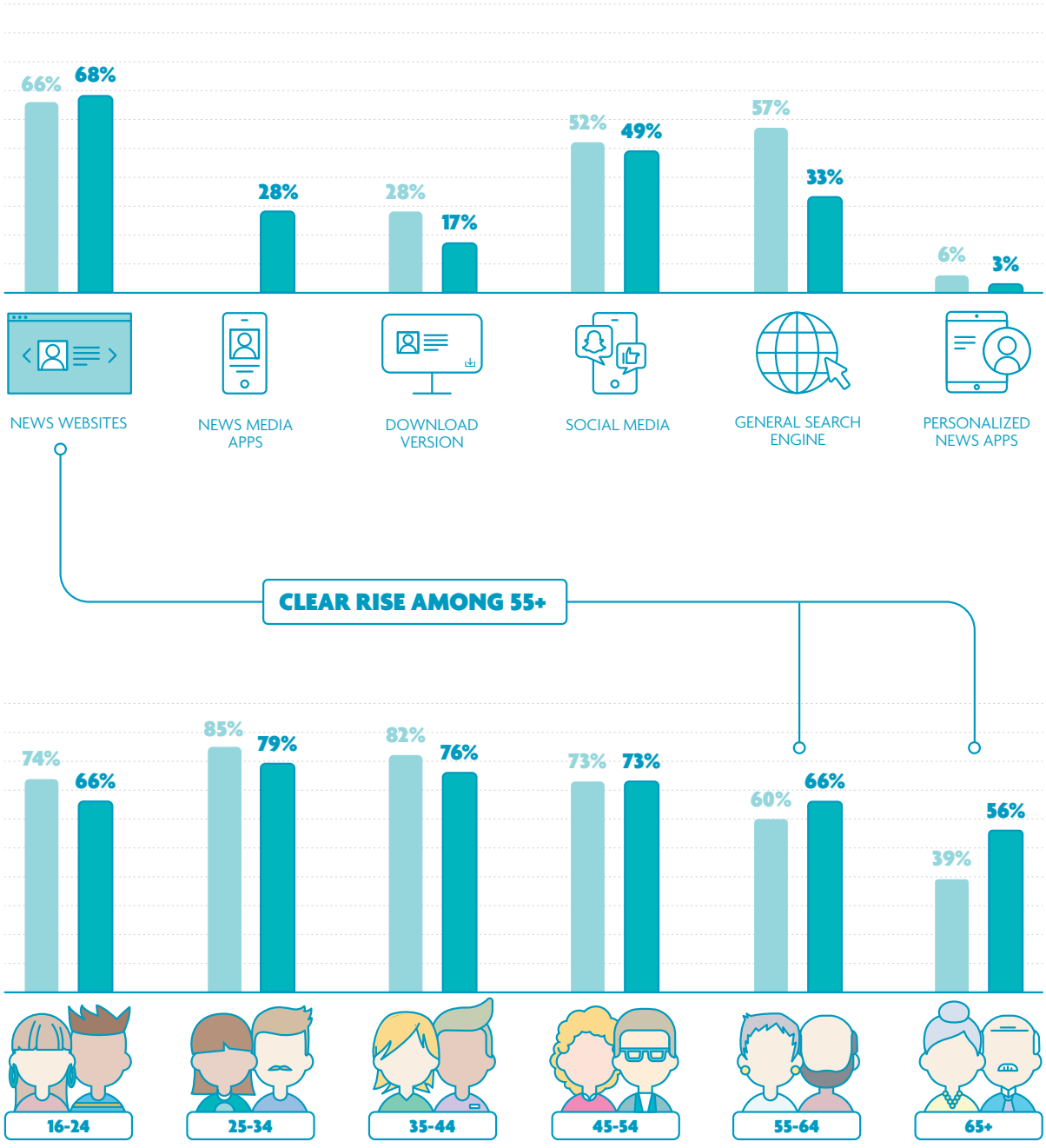
DAILY NEWS CONSUMPTION

Actively following the news down among 16-24 year olds



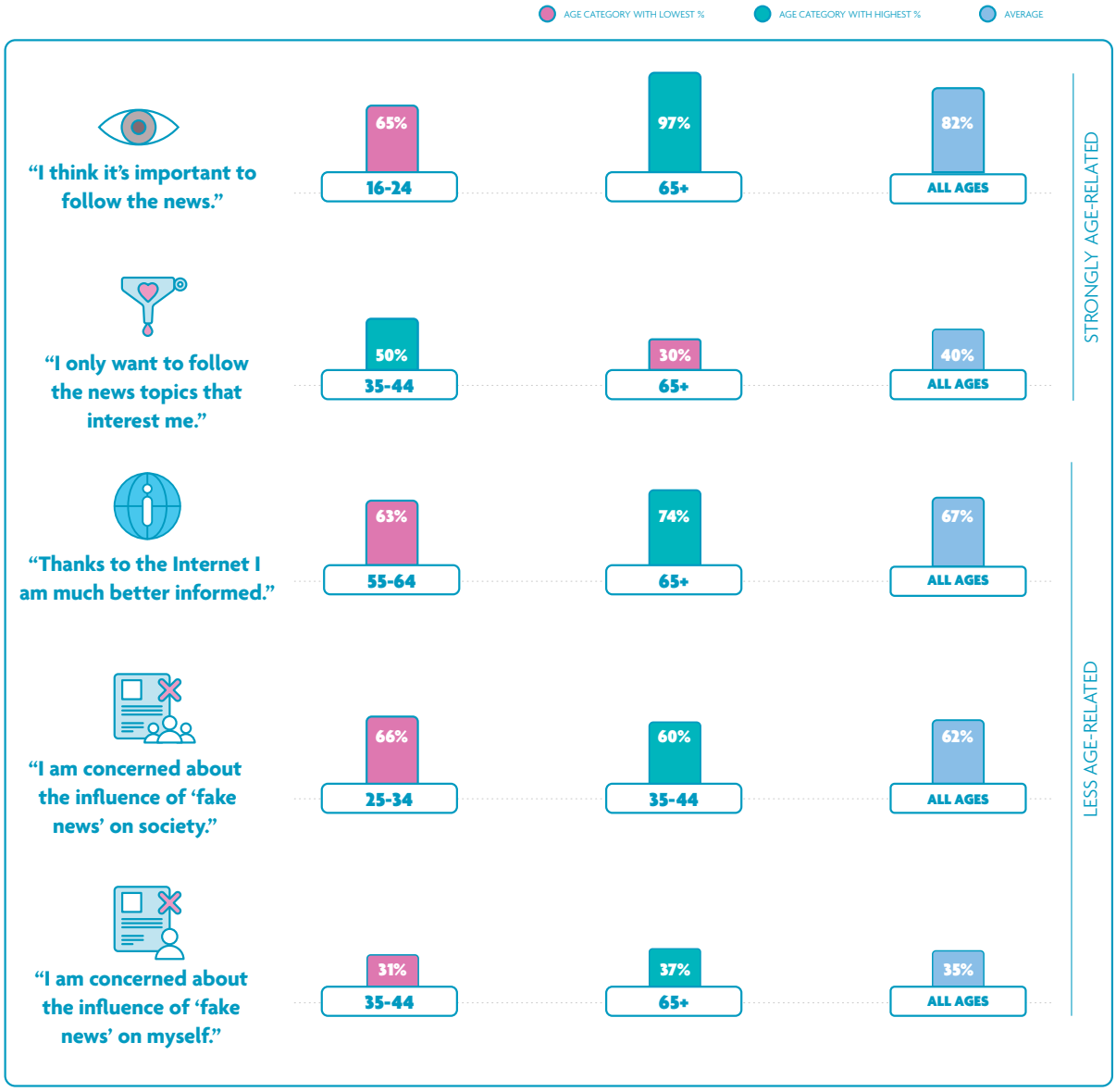
DIGITAL NEWS CHANNELS

News websites struggling with ageing of the reading audience



ATTITUDE TO NEWS

Positive attitude to news, but concern about the impact of fake news



NEWS

The news media have had a turbulent few years. Changes in the media landscape are placing traditional income models under pressure. For instance, the coverage of printed newspapers is falling[18] and (online) advertisements and subscription to digital news have not (yet) made up for this los[19]. Social media have also taken over the role more of providing access to news from the news media per se. Not only for bundling news (with social media used as a folder in which articles from various news media are collected and then disseminated), but also as a direct communication platform between politicians (for example) and the public, without the news media acting as a (critical) intermediate stage[20].

Yet there are hopeful signs for the mews media in the (near) future. According to the Digital News Report from the Reuters Institute for the Study of Journalism[21], people are seeing an increasing distinction between the role of journalists and news media, on the one hand, and platforms such as social media and search engines (such as Google), on the other. This appears to show trust in the news media growing, while trust in other platforms (social media, search engines) is falling[22]. This can also be seen from the fact that increasingly few people use social media as a frequent source of news. Paying for online news is also increasing, although this growth is visible mainly in Western, prosperous regions. Sweden and Norway have the largest proportion of people willing to pay for digital news (30% and 26% respectively). The US has seen significant growth in paying for online news in recent years (rising from 9% in 2016 to 16% in 2018). This growth is attributable mainly to the presidential elections in 2016, when many Americans found there was a need to access more reliable news[23]. There has also been a slight increase in Belgium for paying for online news, rising by 2 percentage points, to 14%. This ranks us in 15th place of the 37 countries included in the study (between the Netherlands and Denmark).

Figures from Digimeter show that news consumption in Flanders remains steady, with almost nine out of ten people stating that they following the news daily. Traditional media, such as national television broadcasters and radio, continue to reach the largest group of Flemings. The smartphone is still in the top 3, but interestingly, it has fallen in day-to-day usage for following the news. This decline is mainly in the youngest segment (16-24).

This doesn't necessarily mean that these younger people don't come into contact with the news. The Digimeter questionnaire implies active consumption of news, with the question being asked of what devices and sources the respondent uses for following the news. A significant part of mobile news consumption is 'coincidental news' – i.e. news you're not looking for per se, but that you happened to come across while doing something else (such as while scrolling through social media)[24]. We also see this reflected in the fall among 16-24 year olds who believe it is important to keep up with the news (from 75% to 65%). This attitude is also very much consistent with daily news consumption: 95% of people who find it important to keep track of the news do so daily via any kind of device or source (compared with 59% who do not agree or who are neutral).

News websites continue to be the most-quoted news channel. The digital, downloadable version of the newspaper, like its printed equivalent, is experiencing a clear decline in monthly usage. Almost three out of ten people in Flanders use an app from a news brand, whereas a little under half use social media monthly to keep up to date with the news. There has also been a fall in Flanders for the use of social media as a news platform – a trend that can also be seen from the Digital News Report[25]. Digital news media (and certainly news apps) and social media tend to reflect each other in terms of their relationship regarding attitudes about the news. News media (news sites, news app and downloadable newspapers) show a positive link with the importance people attach to the news, whereas this link is lacking for news obtained via social media. Conversely, we can see that social media are a particularly popular source of news for anyone who only wants to follow the news about the topics of interest to them, whereas there is not this link with the use of news apps and downloadable newspapers.

18 https://www.ubabelgium.be/nl/news-insights/detail/2018/09/19/Eerste-lessen-uit-de-CIM-National-Readership-Survey-NRS-de-Franstalige-dagbladen-krijgen-klappen
19 https://digiday.com/media/publishers-promises-incremental-revenue-dont-add-replace-lost-ad-dollars/
20 https://www.nytimes.com/2018/05/31/us/politics/bernie-sanders-town-hall.html
21 http://www.digitalnewsreport.org/survey/2018/overview-key-findings-2018/
22 Also see https://www.edelman.com/sites/g/files/aatuss191/files/2018-10/2018_Edelman_Trust_Barometer_Global_Report_FEB.pdf slides 19-20
23 https://www.recode.net/2018/8/9/17671000/new-york-times-trump-subscribers-news-slower-growth
24 Boczkowski, Pablo, Eugenia Mitchelstein, en Mora Matassi. 2017. "Incidental News: How Young People Consume News on Social Media". Proceedings of the 50th Hawaii International Conference on System Sciences. doi: 10.24251/HICSS.2017.217. http://hdl.handle.net/10125/41371
25 http://www.digitalnewsreport.org/survey/2018/overview-key-findings-2018/

In general, the Flemish acknowledge the positive sides of digital news. Two out of three Flemings believe they are better informed thanks to the Internet. Although they are not blind to the challenges that go with it. More than six out of then Flemings feel concerned about the impact that fake news has on society. It is of interest that they don't think that this is too bad. In fact only 35% say that they are concerned about the impact that fake news has on them. This shows that many Flemings believe fake news is something that happens to other people, whereas they consider themselves sufficiently 'media-savvy' to deal with it.

FREQUENCY OF FOLLOWING THE NEWS

	Ever				Monthly				Daily			
	2015	2016	2017	2018	2015	2016	2017	2018	2015	2016	2017	2018
Radio	85%	87%	85%	**85%**	75%	79%	76%	**75%**	59%	62%	58%	**56%**
National television	85%	87%	83%	**90%**	78%	79%	76%	**79%**	57%	55%	52%	**56%**
Smartphone	54%	64%	75%	**72%**	45%	56%	61%	**61%**	29%	41%	51%	**45%**
Computer	70%	71%	74%	**76%**	59%	60%	67%	**60%**	35%	35%	38%	**37%**
Print newspaper	78%	75%	76%	**72%**	55%	53%	54%	**45%**	32%	29%	29%	**22%**
Tablet	46%	48%	56%	**47%**	35%	38%	41%	**32%**	19%	21%	20%	**18%**
Regional television	70%	62%	58%	**66%**	44%	41%	34%	**39%**	21%	16%	14%	**16%**
Apps on smart TV		13%	20%	**27%**		8%	12%	**13%**		4%	8%	**7%**
Print magazine		69%	70%	**67%**		40%	40%	**37%**		4%	4%	**4%**
Smartwatch		1%	4%	**11%**		1%	2%	**6%**		0%	1%	**3%**

How often do you use the sources or devices below to follow the news? (total population N=4,547)

FOLLOW THE NEWS DAILY - SPLIT PER AGE GROUP

		16-24	25-34	35-44	45-54	55-64	65+	*Total*
Radio	2017	32%	46%	63%	65%	66%	68%	*58%*
	2018	**23%**	**42%**	**52%**	**61%**	**66%**	**76%**	***56%***
National television	2017	21%	23%	42%	58%	73%	75%	*52%*
	2018	**22%**	**24%**	**37%**	**62%**	**76%**	**91%**	***56%***
Smartphone	2017	62%	61%	65%	58%	36%	21%	*51%*
	2018	**51%**	**68%**	**60%**	**46%**	**33%**	**21%**	***45%***
Computer	2017	31%	42%	41%	42%	39%	35%	*38%*
	2018	**26%**	**40%**	**39%**	**40%**	**41%**	**35%**	***37%***
Print newspaper	2017	8%	13%	16%	28%	44%	49%	*29%*
	2018	**6%**	**8%**	**12%**	**20%**	**27%**	**46%**	***22%***
Tablet	2017	12%	19%	25%	26%	26%	14%	*20%*
	2018	**6%**	**10%**	**19%**	**21%**	**23%**	**23%**	***18%***
Regional television	2017	2%	3%	8%	12%	22%	26%	*14%*
	2018	**3%**	**3%**	**6%**	**14%**	**16%**	**41%**	***16%***
Apps on smart TV	2017	7%	8%	8%	11%	6%	6%	*8%*
	2018	**9%**	**9%**	**10%**	**7%**	**4%**	**4%**	***7%***
Print magazine	2017	1%	0%	1%	2%	8%	8%	*4%*
	2018	**1%**	**1%**	**1%**	**2%**	**3%**	**10%**	***4%***
Smartwatch	2017	0%	1%	0%	1%	0%	2%	*1%*
	2018	**6%**	**5%**	**2%**	**14%**	**2%**	**1%**	***3%***
Any other source/device	2017	84%	87%	86%	89%	90%	89%	*88%*
	2018	**69%**	**84%**	**84%**	**91%**	**95%**	**98%**	***88%***

How often do you use the sources or devices below to follow the news? - % Daily (total population N=4,547)

DIGITAL NEWS CHANNELS ON A MONTHLY BASIS - SPLIT BY AGE GROUP

		16-24	25-34	35-44	45-54	55-64	65+	*Total*
News websites (e.g. HLN.be, VTM.be/nieuws)	2017	74%	85%	82%	73%	60%	39%	*66%*
	2018	**66%**	**79%**	**76%**	**73%**	**66%**	**56%**	***68%***
News media apps (e.g. app from De Standaard, Sporza)	2017							
	2018	**26%**	**34%**	**37%**	**31%**	**26%**	**17%**	***28%***
Downloadable version of newspaper/magazine (identical to the print version, often in PDF	2017	19%	29%	36%	35%	28%	22%	*28%*
	2018	**8%**	**10%**	**16%**	**21%**	**19%**	**21%**	***17%***
Social media	2017	77%	80%	74%	52%	33%	23%	*52%*
	2018	**74%**	**73%**	**58%**	**47%**	**38%**	**21%**	***49%***
General search engine (e.g. Google, Bing)	2017	66%	68%	73%	62%	52%	36%	*57%*
	2018	**34%**	**37%**	**32%**	**35%**	**37%**	**27%**	***33%***
Personalizable news apps (e.g. Flipboard, Feedly)	2017	10%	10%	11%	7%	3%	2%	*6%*
	2018	**4%**	**5%**	**6%**	**4%**	**3%**	**1%**	***3%***

What digital channels have you used in the past month to follow the news? Multiple answers possible. (total sample N=4,547)

ATTITUDE TO THE NEWS

	Totally agree	Do not agree	Neutral	Agree	Totally agree	*(Totally) agree*
I think it's important to follow the news	2%	3%	13%	35%	47%	*82%*
I only want to follow the news for the topics that interest me	8%	21%	31%	32%	8%	*40%*
Thanks to the Internet I am much better informed	3%	7%	23%	45%	22%	*67%*
I am concerned about the effect of fake news on society	3%	7%	28%	38%	24%	*62%*
I am concerned about the effect of fake news on myself	10%	18%	37%	23%	11%	*35%*

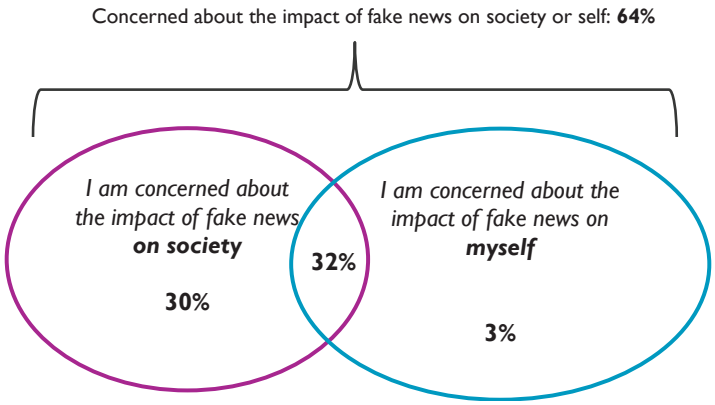
To what extent do you agree with the following statements? [scale of 1 to 5] (total sample N=4,547)

ATTITUDE TO THE NEWS - PROPORTION (TOTAL) AGREE - SPLIT BY AGE GROUP

		16-24	25-34	35-44	45-54	55-64	65+	*Total*
I think it's important to follow the news	2017	75%	77%	84%	87%	94%	93%	*86%*
	2018	**65%**	**73%**	**75%**	**83%**	**87%**	**97%**	***82%***
I only want to follow the news for the topics that interest me	2017	37%	44%	42%	38%	39%	30%	*38%*
	2018	**43%**	**49%**	**50%**	**38%**	**39%**	**30%**	***40%***
Thanks to the Internet I am much better informed	2017							
	2018	**67%**	**73%**	**66%**	**64%**	**63%**	**74%**	**67%**
I am concerned about the effect of fake news on society	2017							
	2018	**61%**	**66%**	**60%**	**62%**	**63%**	**61%**	**62%**
I am concerned about the effect of fake news on myself	2017							
	2018	**36%**	**34%**	**31%**	**34%**	**35%**	**37%**	**35%**

To what extent do you agree with the following statements? - % (totally) agree (4 or 5 on a scale of 1 to 5) (total sample N=4,547)

CONCERNED ABOUT THE IMPACT OF FAKE NEWS



To what extent do you agree with the following statements? - % (totally) agree (4 or 5 on a scale of 1 to 5) (total sample N=4,547)

% DAILY NEWS - SPLIT OF ATTITUDE TO THE NEWS

	I think it's important to follow the news		I only want to follow the news for the topics that interest me		Thanks to the Internet I am much better informed		I am concerned about the effect of fake news on society	
	(Totally) disagree / neutral	**(Totally) agree**	(Totally) disagree / neutral	**(Totally) agree**	(Totally) disagree / neutral	**(Totally) agree**	(Totally) disagree / neutral	**(Totally) agree**
Newspaper	6%	**26%**	26%	**16%**	17%	**16%**	21%	**23%**
Magazine	1%	**4%**	5%	**2%**	1%	**2%**	4%	**4%**
National television	19%	**64%**	61%	**48%**	47%	**52%**	54%	**57%**
Regional television	4%	**19%**	17%	**14%**	10%	**12%**	16%	**16%**
Radio	27%	**62%**	58%	**51%**	50%	**53%**	52%	**57%**
Computer	16%	**42%**	36%	**39%**	26%	**46%**	31%	**41%**
Smartphone	30%	**48%**	42%	**49%**	32%	**59%**	41%	**47%**
Tablet	7%	**20%**	17%	**20%**	10%	**23%**	16%	**19%**
Smartwatch	3%	**3%**	3%	**5%**	11%	**15%**	3%	**4%**
Apps on smart TV	6%	**7%**	6%	**7%**	7%	**11%**	5%	**8%**
Any other source/device	59%	**95%**	89%	**86%**	80%	**91%**	85%	**90%**

How often do you use the sources or devices below to follow the news?- % Daily - Split by attitude to the news (total population N=4,547)
Example: 26% of people who (totally) agree that following the news is important follow the news daily via newspapers. Only 6% of people who (totally) disagree that the news is important or are neutral to it say that they read the news every day in the newspaper.

% MONTHLY DIGITAL NEWS CHANNELS - SPLIT BY ATTITUDE TO THE NEWS

	I think it's important to follow the news		I only want to follow the news for the topics that interest me		Thanks to the Internet I am much better informed		I am concerned about the effect of fake news on society	
	(Totally) disagree / neutral	**(Totally) agree**	(Totally) disagree / neutral	**(Totally) agree**	(Totally) disagree / neutral	**(Totally) agree**	(Totally) disagree / neutral	**(Totally) agree**
News websites (e.g. HLN.be, VTM.be/nieuws)	45%	**74%**	66%	**73%**	59%	**80%**	64%	**72%**
News media apps (e.g. app from De Standaard)	13%	**31%**	28%	**28%**	20%	**37%**	24%	**30%**
Downloadable version of newspaper/magazine (identical to the print version, often in PDF format)	4%	**20%**	18%	**16%**	13%	**21%**	15%	**18%**
Social media (e.g. Facebook, Twitter)	50%	**48%**	45%	**55%**	40%	**62%**	47%	**51%**
General search engine (e.g. Google, Bing)	21%	**36%**	32%	**35%**	24%	**39%**	27%	**37%**
Personalizable news apps (e.g. Flipboard, Feedly)	3%	**3%**	3%	**4%**	3%	**5%**	2%	**4%**

Which digital channels have you used in the past month to follow the news - Split by attitude to the news (total population N=4,547)
Example: 74% of people who (totally) agree that following the news is important visit a news website at least once a month. Only 45% of people who (totally) disagree that the news is important or are neutral to it say that they visit a news website each month.

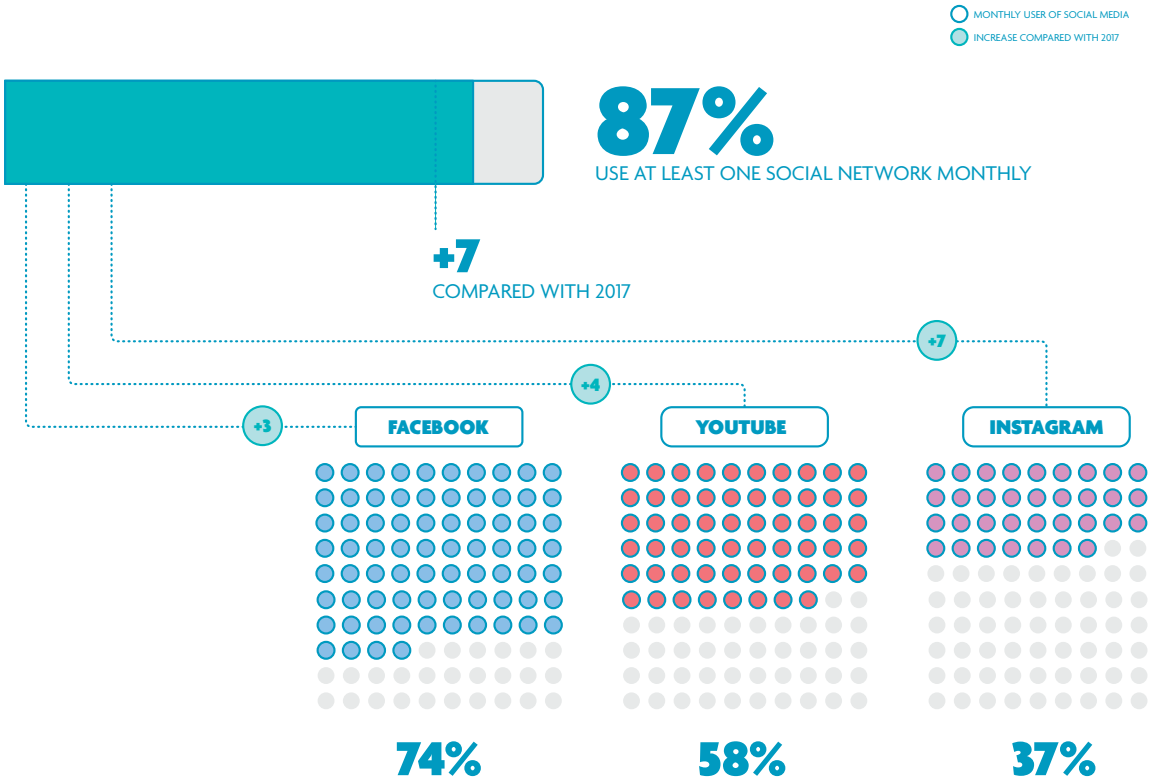
CHAPTER 4

SOCIAL MEDIA

Used by increasing numbers of Flemings

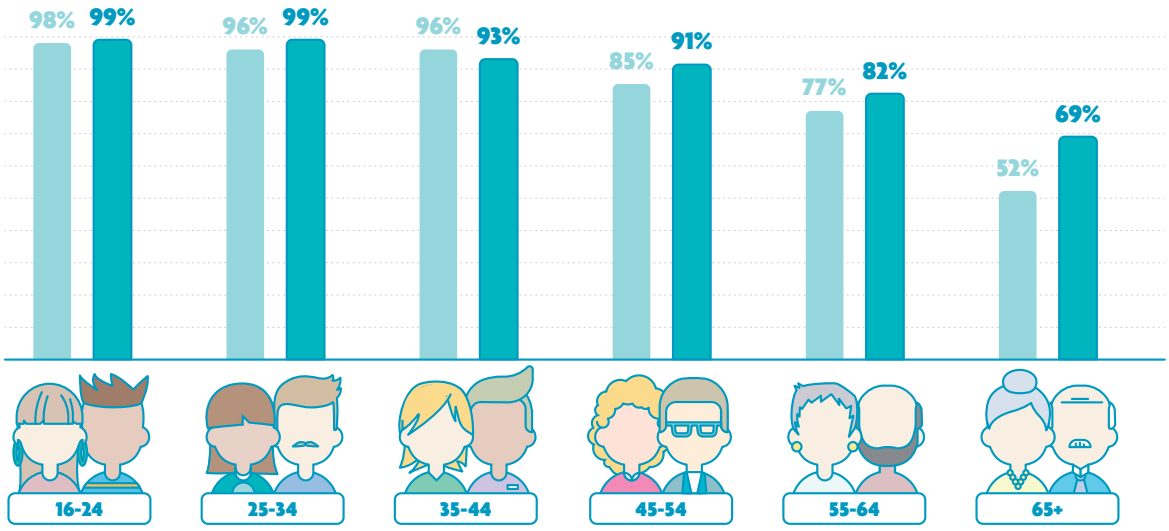
USE OF SOCIAL NETWORKS

Monthly use of social networks

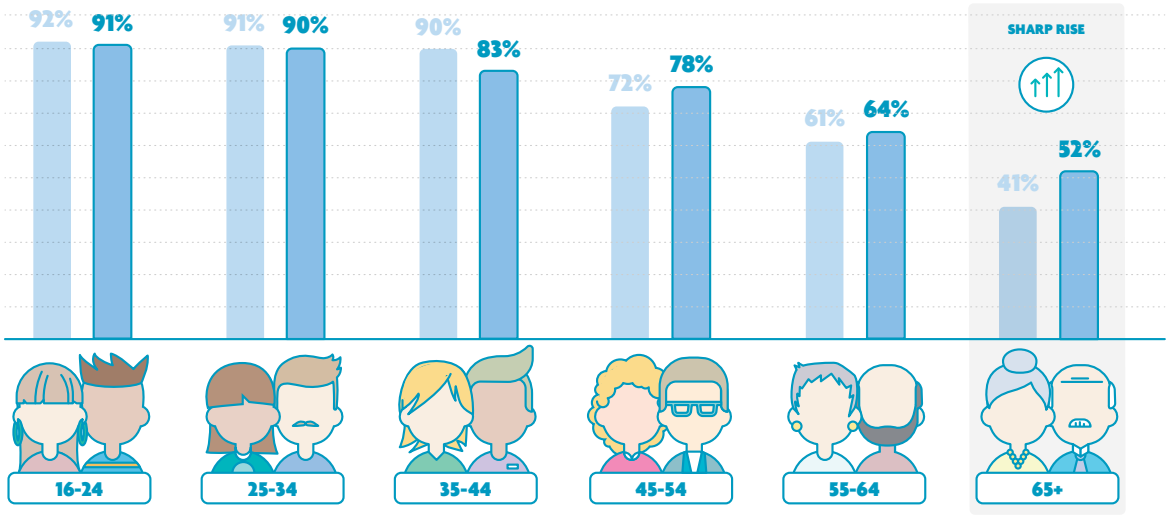


Sharp rise in the older segments

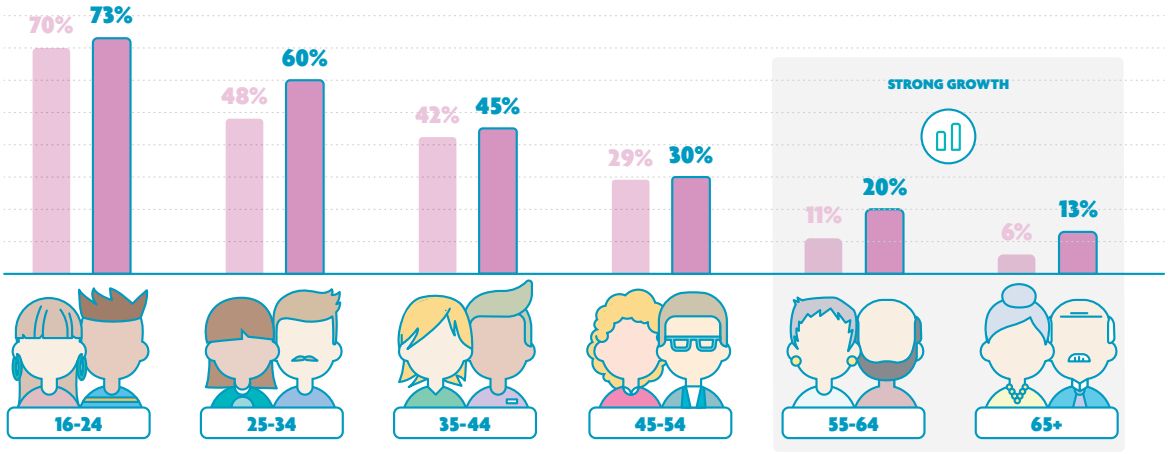
Higher usage figures still in younger segments, although stronger growth in older segments.



Facebook **grew** most **strongly** among **65+**

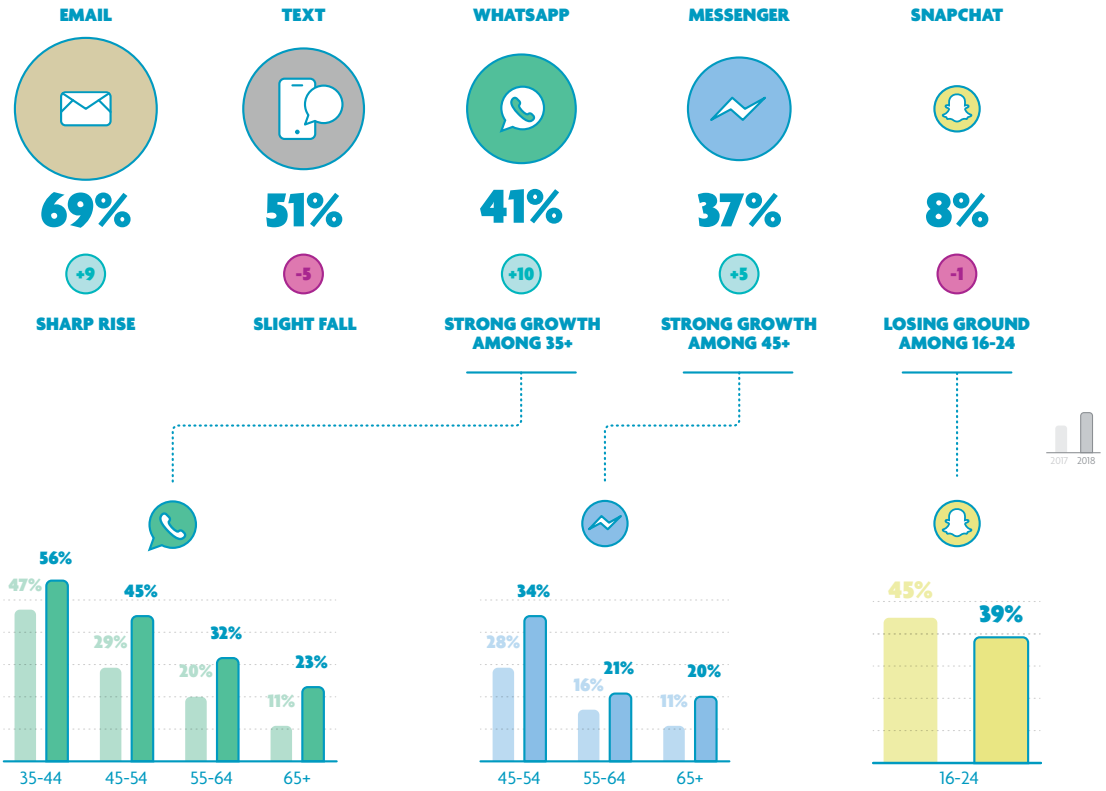


Instagram **grew strongly** among **55+**



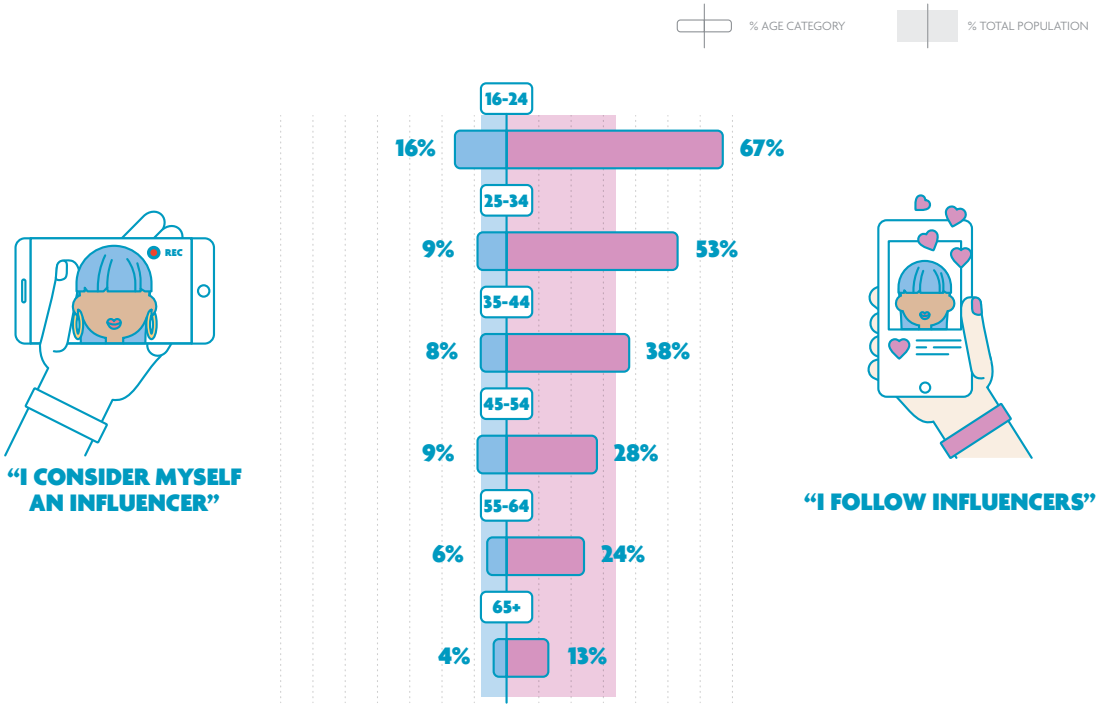
DAILY USE OF MESSAGING

Snapchat becoming less popular



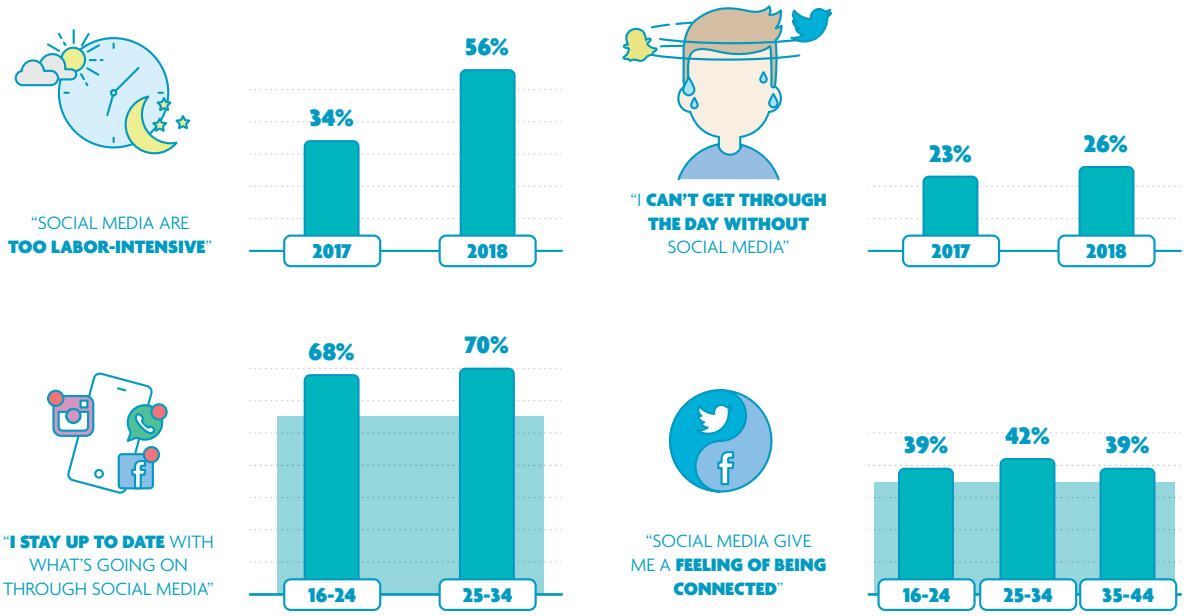
INFLUENCERS

The role of influencers on social media particularly among younger people



ATTITUDE TO SOCIAL MEDIA

Younger people feel more connected by social media



SOCIAL MEDIA

Social media continue to be very popular in Flanders, with almost nine people out of ten using a social network in the past month. Instagram is the fastest grower, especially in the 25-34 age group, recording a sharp rise in monthly usage (up from 48% to 60%). Facebook is still the social network with the largest number of users in Flanders. The multiple scandals surrounding fake news and data leaks do not appear to have put a dent in the platform yet in Flanders. Three-quarters of Flemings say that they use Facebook monthly. Only within the 35-44 age group do we see any decline (from 90% to 83%), but with 8 out of 10 people still saying that they use it monthly, it's hard to say that there is any problem within this age group. Against expectations, Facebook is also holding its own in the youngest age group (16-24). This compares with reports in the Netherlands, for example, saying that there is a fall in the youngest age segment[26]. Another important difference is that in Holland, social media such as WhatsApp, Snapchat, YouTube and Instagram have more users among 15-19 year olds, while in Flanders, only YouTube is keeping pace with Facebook. In line with the stable position of Facebook in Flanders, is the fact that the number of Flemings concerned about their privacy on social media is steady at around the 55% mark, with little variation between the age groups. This means that increased reports about data leaks on social media and the new GDPR guidelines would not seem to have generated increased concern about privacy on social media.

Among the message services, we can see that Facebook Messenger and WhatsApp have growing numbers of daily users (respectively from 32% to 37%, and from 31% to 41%). For the first time this makes WhatsApp the most popular online messaging service. In the Netherlands, WhatsApp has been enormously popular for some years and even has more users than Facebook[27]. The number of daily users of Snapchat continues to stay around 7%. An important factor here is that Snapchat has seen a significant drop in the youngest age segment (falling from 45% to 39%). Internationally, it is said with increasing frequency that Snapchat is unable to find a response to counter Instagram Stories[28], for example, and the number of daily users is gradually stagnating[29].

Taken altogether, we can see that social media has become more and more a game of "Facebook versus the rest". It has to be said that Instagram, WhatsApp and Facebook Messenger are also members of the Facebook family. With social networks, we are only seeing YouTube come anywhere near Facebook and Instagram; networks such as LinkedIn, Pinterest and Twitter continue to have significantly fewer users. Among the online messaging services, WhatsApp and Facebook Messenger are already undisputed market leaders, despite frantic efforts by the likes of Google[30]. Increasing numbers of voices are being raised both in the US[31] and Europe[32] clamoring for the Facebook group to be split into sub-companies so that there is more competition in that market, but especially so that less power (and data) is centralized with a single player[33].

As in previous years, we are seeing strong growth in the use of social media within the older age groups. Nearly seven out of ten over-65s say that they use a social network monthly. A year ago, that figure was down at 52%. Messaging services such as Facebook Messenger and WhatsApp are becoming increasingly popular within that age group. This is also in line with the growing ownership of mobile devices such as smartphones and tablets (see section on Devices & Connections).

Image has increasingly become more of a distinguishing factor on social media. In addition to photos, increasing numbers of videos are being shared via social networks. Almost four out of ten Flemings say that they have posted a video publicly via a social network; 6% say they have already posted at least 10 clips. As you would expect, the number of Flemings who say that they have posted a video is a good deal higher in the younger age segments (57%). Interestingly, the number of young people who have posted at least 10 videos (7%) is in line with the figure for the total population (6%). So, many youngsters may have posted a video, but only a small group does so intensively. The two most popular types of videos are clips about something funny that happened, or a video featuring a performance.

26 https://www.newcom.nl/index.php?page=socialmedia2018
27 https://www.newcom.nl/socialmedia2018
28 https://www.cnbc.com/2018/06/28/instagram-stories-daily-active-users-double-snapchats.html
29 https://investor.snap.com/-/media/Files/S/Snap-IR/reports-and-presentations/earnings-slides-q3-18.pdf
30 https://techcrunch.com/2018/12/05/farewell-allo/
31 https://www.businessinsider.nl/freedom-from-facebook-wants-to-destroy-facebook-monopoly-2018-7/
32 https://www.handelsblatt.com/today/politics/legal-eagles-could-the-eu-really-break-up-facebooks-monopoly/23582226.html
33 https://www.technologyreview.com/s/611425/its-time-to-rein-in-the-data-barons/

Alongside that, we can see that 8% of Flemings consider themselves as influencers[34]. This figure is a good deal higher if we filter out Flemings who have posted at least 10 videos on social networks (23%). Influencers have the greatest reach among 16-24 year olds, with 67% stating that they follow influencers and 16% also seeing themselves as influencers.

The fact that social media are playing an ever-greater role in our lives can also be seen from the rising concern about the time we spend on it, particularly among the older age groups. In the youngest age group, we are seeing a striking rise in the proportion that say that they cannot get through the day without using social media (from one in four in 2017 to one in three in 2018). It is the younger age group in particular that believes social media also have a positive effect on our society. Seven out of ten Flemings under the age of 35 say they are more aware of what is going on because of social media and four out of ten feel more connected due to social media.

34 The term 'influencers' was described as follows in the questionnaire: "Social media also enable you to follow people you don't know personally, but who may well inspire you and whose ideas, opinions and recommendations you find to be valuable. These inspirers are also called 'influencers', because they influence the opinion of their (larger group of) followers."

MONTHLY USE OF SOCIAL MEDIA

		16-24	25-34	35-44	45-54	55-64	65+	*Total*
Facebook	2017	92%	91%	90%	72%	61%	41%	*71%*
	2018	**91%**	**90%**	**83%**	**78%**	**64%**	**52%**	***74%***
YouTube	2017	89%	74%	64%	56%	39%	26%	*54%*
	2018	**89%**	**75%**	**67%**	**54%**	**48%**	**32%**	***58%***
Instagram	2017	70%	48%	42%	29%	11%	6%	*30%*
	2018	**73%**	**60%**	**45%**	**30%**	**20%**	**13%**	***37%***
LinkedIn	2017	14%	35%	39%	28%	18%	6%	*21%*
	2018	**16%**	**36%**	**33%**	**32%**	**20%**	**6%**	***23%***
Pinterest	2017	25%	32%	31%	26%	13%	7%	*21%*
	2018	**26%**	**30%**	**26%**	**21%**	**19%**	**11%**	***21%***
Twitter	2017	31%	24%	24%	23%	11%	6%	*18%*
	2018	**26%**	**26%**	**25%**	**19%**	**11%**	**7%**	***18%***
Reddit	2017	11%	9%	5%	1%	0%	0%	*4%*
	2018	**11%**	**13%**	**7%**	**2%**	**0%**	**0%**	***5%***
Tinder	2017	16%	9%	3%	4%	0%	0%	*5%*
	2018	**13%**	**10%**	**3%**	**2%**	**1%**	**0%**	***4%***
Slack	2017	3%	8%	6%	2%	0%	0%	*3%*
	2018	**5%**	**10%**	**6%**	**4%**	**1%**	**0%**	***4%***
Swarm	2017	20%	7%	4%	4%	1%	0%	*5%*
	2018	**13%**	**7%**	**3%**	**1%**	**0%**	**0%**	***4%***
Tumblr	2017	13%	4%	3%	3%	1%	0%	*3%*
	2018	**9%**	**6%**	**2%**	**3%**	**1%**	**1%**	***3%***
Foursquare	2017	8%	6%	2%	3%	1%	0%	*3%*
	2018	**5%**	**3%**	**2%**	**1%**	**1%**	**0%**	***2%***
We heart it	2017	7%	0%	0%	1%	0%	0%	*1%*
	2018	**3%**	**0%**	**0%**	**0%**	**0%**	**0%**	***1%***

Which of the social media below have you used in the past month? (total sample N=4,547)

FREQUENCY OF PUBLIC POSTING OF VIDEOS ON SOCIAL MEDIA

	16-24	25-34	35-44	45-54	55-64	65+	*Total*
Never (yet)	43%	50%	56%	63%	80%	86%	***63%***
1 video	14%	9%	10%	8%	4%	5%	***8%***
2-5 videos	29%	26%	20%	17%	10%	5%	***18%***
6-10 videos	7%	8%	7%	6%	3%	2%	***5%***
11-20 videos	2%	2%	3%	3%	2%	1%	***2%***
More than 20 videos	5%	6%	5%	4%	1%	2%	***4%***

Have you ever posted a self-made video on social media such as YouTube, Facebook, etc.? NB: this relates to posting videos on a public page. Does not include the private sharing of videos via Snapchat, Instagram or a closed Facebook group. (total sample N=4,547)

% TYPE OF VIDEOS POSTED - SPLIT BY NUMBER OF VIDEOS POSTED

	1 video	2-5 videos	6-10 videos	More than 10 videos	*Total*
A video that you made of a funny event	23%	35%	44%	40%	***34%***
A video that you made during a performance/festival	16%	33%	42%	50%	***33%***
A video in which you yourself sing and/or play music	8%	11%	17%	17%	***12%***
1 video in which you film a sports performance (skating, snowboarding, mountainbiking, etc.)	7%	12%	14%	16%	***12%***
A video that you put together yourself based on existing images and music (fan video)	5%	11%	11%	19%	***11%***
A video in which you state your opinion or relate your experiences (videoblog/vlog)	8%	7%	7%	14%	***8%***
An animation video or stop-motion video	4%	5%	13%	13%	***7%***
A video of a game that you are playing (Let's play video, walkthrough)	2%	6%	10%	12%	***7%***
A video in which you act out a sketch or give a comedy performance	5%	6%	5%	9%	***6%***
A video in which you state your opinion about games, series, devices, etc. (reviews)	3%	4%	5%	14%	***6%***
A video that you recorded from the television or in the cinema	2%	4%	6%	8%	***5%***

You said that you have previously posted one or more videos on social media. What type of video(s) have you posted before? Multiple answers possible. - Split by total number of videos ever posted (total sample N=4,547)
Example: of all those who say they have ever posted a video on social media, 23% say that it was a video of a funny event. Of those who have posted more than 10 videos, 40% say that it involved (for instance) videos of a funny event.

MESSAGE SERVICES

	Have not/don't know	Don't any more	Never	Seldom	Monthly	Weekly	Daily
E-mail	2%	0%	1%	5%	4%	18%	69%
Text	2%	0%	1%	10%	6%	29%	51%
Facebook Messenger	16%	2%	11%	8%	7%	20%	37%
WhatsApp	18%	2%	10%	6%	5%	18%	41%
Google Hangouts	55%	5%	28%	8%	2%	2%	2%
Snapchat	45%	7%	26%	7%	3%	5%	7%
iMessage	49%	3%	24%	5%	2%	6%	10%
Skype	27%	10%	21%	25%	7%	7%	4%
Facetime	44%	3%	25%	15%	5%	7%	2%
Telegram (online message service)	63%	4%	29%	2%	1%	1%	1%
Signal	69%	2%	26%	1%	0%	0%	1%

How often do you use the following services and applications? (total sample N=4,547)

DAILY USE OF THE FOLLOWING SERVICES AND APPLICATIONS - SPLIT BY AGE GROUP

		16-24	25-34	35-44	45-54	55-64	65+	*Total*
E-mail	2017	53%	68%	75%	67%	62%	46%	60%
	2018	**53%**	**79%**	**85%**	**76%**	**64%**	**60%**	**69%**
Text	2017	68%	60%	69%	67%	53%	32%	56%
	2018	**66%**	**45%**	**54%**	**58%**	**46%**	**43%**	**51%**
Facebook Messenger	2017	76%	48%	33%	28%	16%	11%	32%
	2018	**75%**	**50%**	**35%**	**34%**	**21%**	**20%**	**37%**
WhatsApp	2017	37%	58%	47%	29%	20%	11%	31%
	2018	**38%**	**60%**	**56%**	**45%**	**32%**	**23%**	**41%**
Google hangouts	2017	1%	2%	2%	0%	2%	0%	1%
	2018	**1%**	**3%**	**3%**	**1%**	**1%**	**1%**	**2%**
Snapchat	2017	45%	9%	3%	2%	1%	0%	8%
	2018	**39%**	**7%**	**4%**	**1%**	**0%**	**1%**	**7%**
iMessage	2017	19%	16%	15%	10%	4%	2%	10%
	2018	**17%**	**15%**	**13%**	**11%**	**4%**	**5%**	**10%**
Skype	2017	4%	4%	4%	5%	1%	2%	3%
	2018	**2%**	**6%**	**7%**	**6%**	**1%**	**2%**	**4%**
Facetime	2017	3%	2%	1%	1%	2%	1%	2%
	2018	**3%**	**2%**	**2%**	**2%**	**2%**	**2%**	**2%**
Telegram	2017	3%	1%	1%	1%	1%	0%	1%
	2018	**1%**	**2%**	**3%**	**0%**	**0%**	**0%**	**1%**
Signal	2017							
	2018	**1%**	**1%**	**1%**	**0%**	**0%**	**0%**	**1%**

How often do you use the following services and applications? - % daily use - Split by age group (total sample N=4,547)

INFLUENCERS

	I consider myself as an influencer	I follow influencers	Neither
YouTube	2%	17%	82%
Instagram	3%	18%	76%
Facebook	5%	17%	79%
Twitter	2%	8%	90%
Pinterest	2%	7%	92%
Snapchat	2%	5%	94%
Total (at least 1 of the above)	***8%***	***34%***	***63%***

Do you consider yourself as an influencer or do you follow influencers via the channels below? (total sample N=4,547)

INFLUENCERS - SPLIT BY AGE GROUP

	16-24	25-34	35-44	45-54	55-64	65+	*Total*
I consider myself as an influencer	16%	9%	8%	9%	6%	4%	***8%***
I follow influencers	67%	53%	38%	28%	24%	13%	***34%***
Neither	30%	45%	57%	68%	74%	84%	***63%***

Do you consider yourself as an influencer or do you follow influencers via the channels below? - % who consider themselves as an influencer or who follow influencers on at least one of the social media listed - Split by age group (total sample N=4,547)

INFLUENCERS - SPLIT BY THE NUMBER OF VIDEOS EVER POSTED

	Never posted a video on social media (yet)	1 video	2-5 videos	6-10 videos	More than 10 videos
I consider myself as an influencer	5%	14%	13%	19%	23%
I follow influencers	33%	46%	53%	56%	55%
Neither	64%	49%	43%	38%	36%

Do you consider yourself as an influencer or do you follow influencers via the channels below? - % who consider themselves as an influencer or who follow influencers on at least one of the social media listed - Split by number of videos ever posted on social media (total sample N=4,547)
Example: of those who have not yet posted videos on social media, 5% consider themselves as an influencer. Among those who have posted more than 10 videos, it is 23%.

ATTITUDE TO SOCIAL MEDIA

	Totally disagree	Disagree	Neutral	Agree	Total agree	*(Totally) agree*
I am concerned about the impact of social media on my privacy	5%	12%	27%	36%	21%	***56%***
As I have no Facebook account, I miss lots of news and events	17%	22%	23%	32%	6%	***38%***
Social media are time-intensive	3%	10%	31%	40%	16%	***56%***
I cannot get through the day without social media	23%	31%	20%	21%	5%	***26%***
I stay up to date with what's going on through social media	8%	12%	25%	46%	9%	***55%***
Social media give me the feeling of belonging	12%	21%	33%	29%	6%	***35%***

What do you think about social media? [scale of 1 to 5] (total sample N=4,547)

ATTITUDE TO SOCIAL MEDIA - PROPORTION (TOTALLY) AGREE - SPLIT BY AGE GROUP

		16-24	25-34	35-44	45-54	55-64	65+	*Total*
I am concerned about the impact of social media on my privacy	2017	50%	47%	53%	56%	67%	55%	*55%*
	2018	**53%**	**56%**	**57%**	**55%**	**59%**	**58%**	***56%***
As I have no Facebook account, I miss lots of news and events	2017	56%	57%	49%	35%	27%	16%	*37%*
	2018	**52%**	**57%**	**43%**	**33%**	**26%**	**27%**	***38%***
Social media are time-intensive	2017	58%	45%	37%	27%	20%	13%	*34%*
	2018	**53%**	**58%**	**61%**	**58%**	**56%**	**52%**	***56%***
I cannot get through the day without social media	2017	26%	27%	24%	23%	17%	21%	*23%*
	2018	**34%**	**30%**	**28%**	**23%**	**17%**	**23%**	***26%***
I stay up to date with what's going on through social media	2017							
	2018	**68%**	**70%**	**58%**	**50%**	**42%**	**43%**	***55%***
Social media give me the feeling of belonging	2017							
	2018	**39%**	**42%**	**39%**	**32%**	**26%**	**31%**	***35%***

What do you think about social media? - % (totally) agree (4 or 5 on a scale of 1 to 5) (total sample N=4,547)

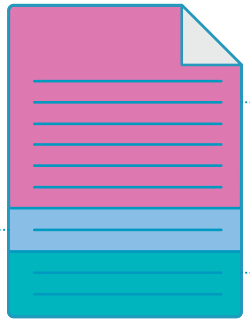
CHAPTER 5

PRIVACY

Flemings attach importance to their online privacy

GENERAL TERMS & CONDITIONS

Most people don't read them

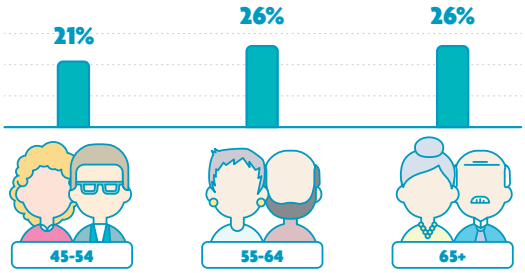


65%
SELDOM OR NEVER READ THE GENERAL TERMS & CONDITIONS

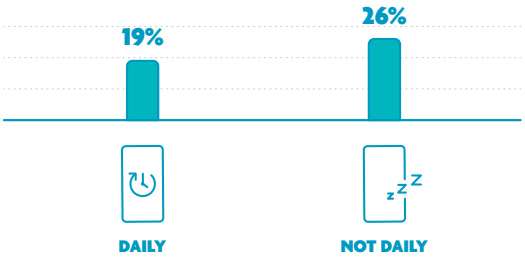
14%
IN FEWER THAN 50% OF CASES

21%
IN MORE THAN 50% OF CASES OR ALWAYS

MAINLY THE OLDER GENERATION READS THE GENERAL TERMS & CONDITIONS AND PRIVACY POLICY



SOMEONE WHO USES THEIR SMARTPHONE LESS THAN DAILY IS MORE INCLINED TO READ THE GENERAL TERMS & CONDITIONS



ATTITUDE TO PRIVACY

The Flemish are reasonably skeptical about how companies deal with their privacy

	16-24	25-34	35-44	45-54	55-64	65+	ALL AGES
As a user I no longer have any control over **what personal information** is gathered about me and used.	53%	66%	67%	66%	71%	72%	67%
As a user **I know what companies can and can't do** with my data.	27%	26%	30%	32%	31%	36%	31%
It **concerns me** that companies are **not transparent** regarding the data they have about me.	57%	66%	66%	67%	69%	68%	66%
I think it's **OK to share personal data** if there's something **in return** (e.g. information and tailored service)	32%	46%	36%	27%	25%	20%	30%

HIGHEST NUMBER

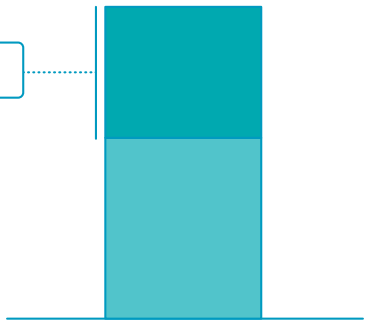
INTERPERSONAL PRIVACY

The majority ask permission from friends before sharing information about them

60%

ASK PERMISSION FROM FRIENDS BEFORE SHARING INFORMATION

BUT

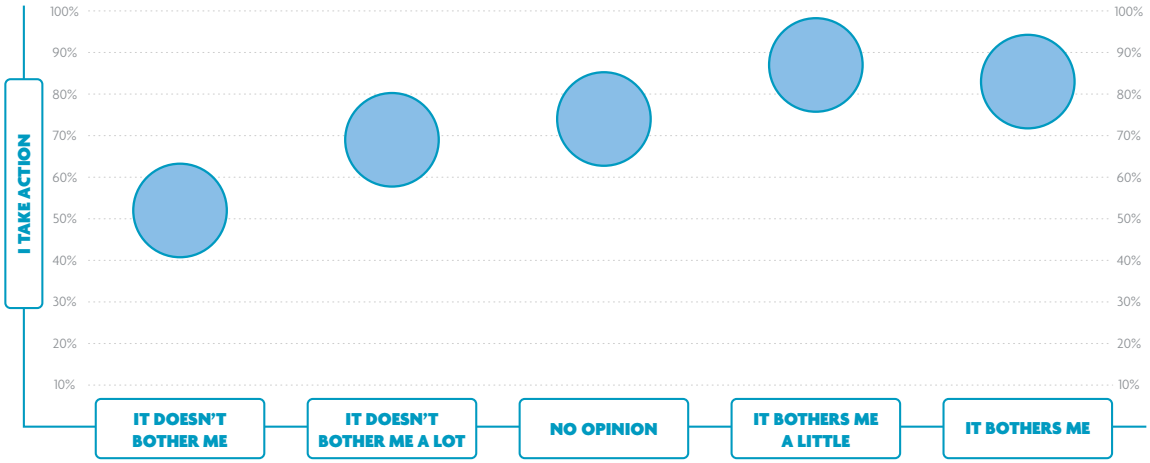


42%

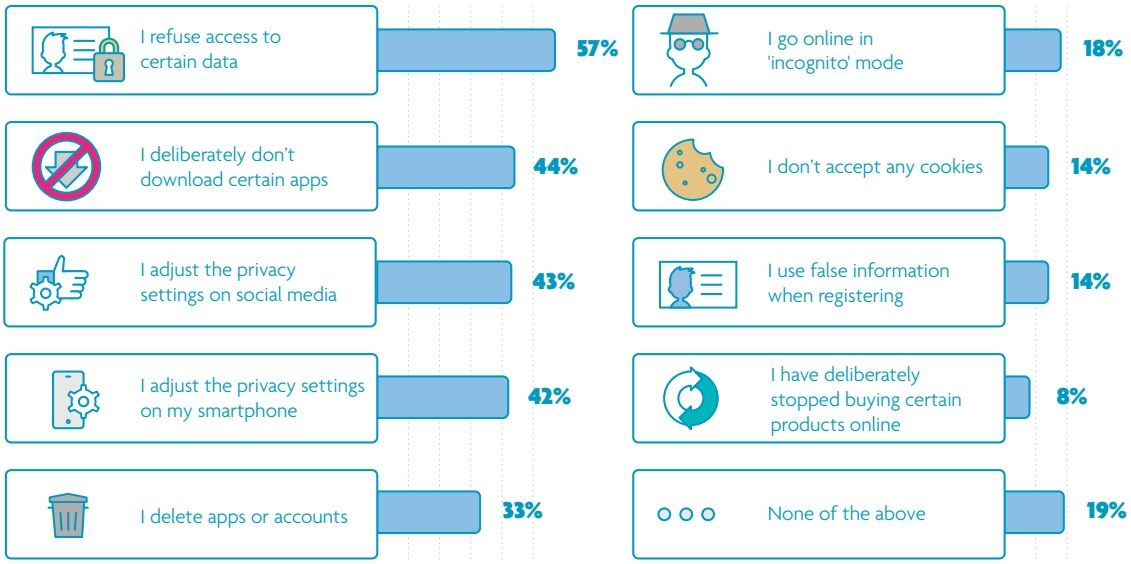
OF THEM SAY THAT FRIENDS SOMETIMES SHARE PHOTOS OR INFORMATION ABOUT THEM WITHOUT THEIR KNOWING

MEASURES

A person who is irritated by companies using their personal data will take more action to protect their privacy



What measures have you already taken?



PRIVACY

The importance of online privacy has made a remarkable U-turn in recent years. Just a few years ago, everyone appeared to agree that privacy was dead[35] and that only someone who had something to hide still attached any importance to it[36]. Opinion-makers and researchers who defended the importance of privacy found themselves up against stiff resistance[37]. But after repeated reports about data leaks and misuse on social media (and especially on Facebook), public opinion began to turn around. For many, the disclosures about how Cambridge Analytica used data from Facebook to influence the presidential elections in the US[38] was the tipping point for viewing online privacy again as an important and fundamental human right. The launch of GDPR[39], the directive that protects the personal data of European citizens, raised awareness even further.

This has also had an effect on the perception and intentions of people in Flanders regarding privacy. For example, one in five Flemings say that in half of cases, they now read the general terms and conditions and the privacy policy before registering anywhere online. And this has a clear connection with age, with one-quarter of over-55s stating that the read general terms and conditions at least half of the time. This appears to be high and is probably also an overstatement due to perceived socially desirable response behavior. Yet we can also see another interesting connection: specifically and in at least half of cases, people who use a smartphone less than daily say that they read the general terms and conditions, as well as privacy statements. This shows that there is a connection between the attitude and views that people have about online security and privacy and the adoption and use of digital technology.

Refusing access to data, consciously not downloading apps, adjusting privacy settings on social media and smartphones are all actions that people take the most to protect their data. Alongside that, 19% also say that they don't take any action to protect their data. We also see a clear link with attitudes regarding privacy. Anyone who does not have the feeling of losing control over the kind of personal data that companies gather about us is also less inclined to take action. The same applies to the lack of transparency that companies show about what data they hold about us; anyone who isn't worried about it will also take no action. For the statement about the feeling that you as a user may or may not know what companies do with your data, we can see that people who answer "totally disagree" or "totally agree" (i.e. at either end of the scale) are the least inclined to take action. "Totally disagree" may be the answer given from a feeling of powerlessness: if you don't know that companies can do with data, it doesn't make any sense to do anything about it. "Totally agree" may refer to trust in (self-)regulation in companies: there are rules governing what you can and can't do, so as a user, there is no action you need to take. The same applies to the statement that you think it's OK to share data if you get something in return. Someone who "totally agrees" is less inclined to take action to protect the data. That may be logical, given that these people are prepared to share their data in order to obtain certain benefits – and so they are also less inclined to take action to shield their data from others. But on the other hand – and somewhat surprisingly – we also see this among people who "totally disagree" with the statement: once again fewer people who say they are definitely against sharing data, even if there is a benefit attached, are less likely to take action to protect their data. The explanation here can be found in the frequency with which digital media are used. For example, we see that out of those who totally disagree with this statement, 38% say they use their smartphone less than daily. This is a fair amount more than with the other response options, where the figure varies between 14% and 27%.

In general, we see that Flemings have a negative perception about how companies deal with their personal data. Two out of three say that users have no control over what data about them is collected and used, while an equally large group is concerned about the lack of transparency among business in that area. This negative feeling increases with age. On a personal front, we see that 60% of Flemings say that they ask permission from friends first before they post anything about them on social media. One striking feature is that out of this group who ask permission, more than four out of ten say that their friends have shared information and photos of them at some stage without asking for permission beforehand.

35 https://www.forbes.com/sites/jacobmorgan/2014/08/19/privacy-is-completely-and-utterly-dead-and-we-killed-it/
36 https://www.theguardian.com/media/2011/nov/29/paul-mcmullan-leveson-inquiry-phone-hacking
37 See, for example, the book "Je hebt wél iets te verbergen" ("You do have something to hide"), published by De Correspondent, in which journalists Maurits Martijn and Dimitri Tokmetzis try to counter the prevailing defeatism about privacy. https://decorrespondent.nl/209/nee-je-hebt-wel-iets-te-verbergen/6428004-ab2d5fc2
38 https://www.bbc.com/news/av/technology-43674480/facebook-data-how-it-was-used-by-cambridge-analytica
39 https://gdpr-eu.be/wat-is-gdpr/

Half of the people in Flanders say that they have no problem with sharing their surname and first name. They usually also have little problem in sharing their date of birth and marital status. Financial and medical data is very sensitive when it comes to sharing. Political preferences and address details also score poorly. There is a clear link with age: the older people are, the more they object to sharing personal data with websites, apps or companies.

As expected, people's willingness to share data also depends on their expectations about how companies deal with user data. In particular, the belief that sharing data can result in receiving better service is an important factor in a person's willingness to share data. People are even prepared to share more sensitive information, such as their sexual orientation (40%), religion (39%) and medical details (10%) if they think that it will provide them with a better product or service than they are if they believe that this will not be the case (24%, 24% and 5% respectively). The lack of transparency about how companies deal with personal data also plays a role, but the effect that this has is not as great as with the statement about sharing data to receive better service. However, we can see that anyone who is concerned about a lack of transparency is significantly less willing to share their address details, date of birth, religion, origins, civil status, financial information, medical details and political preferences. In other words, when it comes to deciding about whether to share data or not with a company or digital platform, belief in receiving better service plays a greater role than frustration about companies being less than transparent in their data policy.

FREQUENCY OF READING GENERAL TERMS AND CONDITIONS AND PRIVACY POLICY

Never	30%
Seldom	35%
In fewer than half of cases	14%
In half of cases	8%
In more than half of cases	7%
Always	7%

How often do you read the general terms and conditions and privacy policy when registering yourself somewhere online? (total sample N=4,547)

GENERAL TERMS AND CONDITIONS AND PRIVACY POLICY READ IN AT LEAST HALF OF CASES OF ONLINE REGISTRATIONS - SPLIT BY AGE GROUP

16-24	17%
25-34	15%
35-44	18%
45-54	21%
55-64	26%
65+	26%
Total	***21%***

How often do you read the general terms and conditions and privacy policy when registering yourself somewhere online? - % in at least half of cases - Split by age group (total sample N=4,547)

GENERAL TERMS AND CONDITIONS AND PRIVACY POLICY READ IN AT LEAST HALF OF CASES OF ONLINE REGISTRATIONS - SPLIT BY DAILY USE OF SMARTPHONE

Less than daily use of smartphone	28%
Daily use of smartphone	19%
Total	***21%***

How often do you read the general terms and conditions and privacy policy when registering yourself somewhere online? - % in at least half of cases - Split by daily use of smartphone (total sample N=4,547)

ACTIONS TAKEN TO PROTECT PERSONAL DATA

I refuse access to certain data	57%
I deliberately do not download certain apps	44%
I adjust the privacy settings for social media	43%
I adjust the privacy settings (via 'Settings') on my smartphone	42%
I delete applications or accounts	33%
I go online in 'incognito' mode	18%
I do not accept any cookies	14%
I use false information when registering	14%
I have deliberately stopped buying certain products online or have switched to another	8%
None of the above	19%

What actions do you take to protect personal data? (total sample N=4,547)

ATTITUDE TO PRIVACY

	Totally disagree	Disagree	Neutral	Agree	Total agree	*(Totally) agree*
As a user, I have no control over what personal information about me is collected or used	2%	10%	22%	46%	21%	*67%*
As a user, I know what companies are allowed (or not) to do with my data	8%	31%	31%	25%	6%	*31%*
I ask permission from friends before sharing information about them	3%	10%	27%	38%	22%	*60%*
Friends sometimes share photos or information about me without me being aware of it	10%	24%	27%	34%	5%	*39%*
It concerns me that companies are not transparent about what data they have about me	2%	7%	26%	40%	26%	*66%*
I think it's OK to share personal data if you get something in return (e.g. information and personalized service)	12%	23%	34%	25%	5%	*30%*

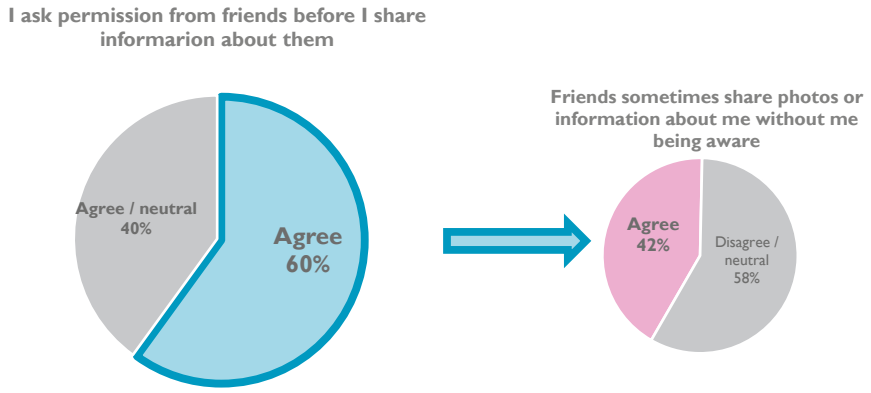
To what extent do you agree with the statements below? - % (totally) agree (4 or 5 on scale of 1 to 5) (total sample N=4,547)

ATTITUDE TO SOCIAL MEDIA - PROPORTION (TOTALLY) AGREE - SPLIT BY AGE GROUP

	16-24	25-34	35-44	45-54	55-64	65+	*Total*
As a user, I have no control over what personal information about me is collected or used	53%	66%	67%	66%	71%	72%	***67%***
As a user, I know what companies are allowed (or not) to do with my data	27%	26%	30%	32%	31%	36%	***31%***
I ask permission from friends before sharing information about them	55%	56%	63%	67%	66%	56%	***60%***
Friends sometimes share photos or information about me without me being aware of it	49%	50%	48%	41%	31%	25%	***39%***
It concerns me that companies are not transparent about what data they have about me	57%	66%	66%	67%	69%	68%	***66%***
I think it's OK to share personal data if you get something in return (e.g. information and personalized service)	32%	46%	36%	27%	25%	20%	***30%***

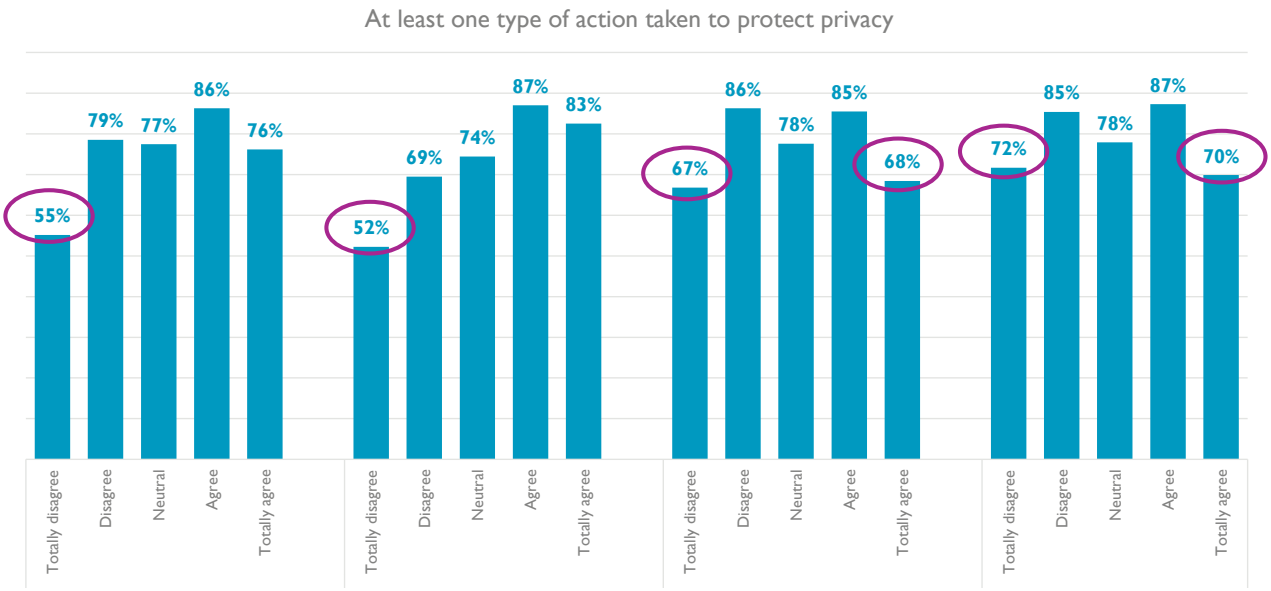
To what extent do you agree with the statements below? - % (totally) agree (4 or 5 on scale of 1 to 5) (total sample N=4,547)

INTERPERSONAL PRIVACY



Ratio of (totally) agree versus (totally) disagree / neutral to the statement "Friends sometimes share photos or information about me without me being aware" within the group of respondents who (totally) agree with the statement "I ask permission from friends before I share information about them" (N=2,728 or 60% of the sample)

ACTIONS TAKEN TO PROTECT PERSONAL DATA - SPLIT BY ATTITUDE TO PRIVACY



What actions do you take to protect personal data? - % at least one type of action taken - Split by attitude to privacy (total sample N=4,547)
Example: 55% of those who totally disagree that, as a user, you no longer have any control over what data is collected and who say they have taken action to protect privacy; among those who totally agree here, it is 76%.

DAILY SMARTPHONE USAGE - SPLIT ON THE STATEMENT "I THINK IT'S OK TO SHARE PERSONAL DATA IF YOU GET SOMETHING IN RETURN (E.G. INFORMATION AND PERSONALIZED SERVICE)"

		Less than daily use of smartphone	Daily use of smartphone
I think it's OK to share personal data if you get something in return (e.g. information and personalized service)	**Totally disagree**	**38%**	**62%**
	Disagree	27%	73%
	Neutral	25%	75%
	Agree	14%	87%
	Totally agree	26%	74%

Daily versus less than daily smartphone usage - Split on statement "I think it's OK to share personal data if you get something in return (e.g. information and personalized services)" (total sample N=4,547)

WILLINGNESS TO SHARE PERSONAL DATA WITH APPS, WEBSITES AND/OR COMPANIES

	Totally disinclined	Somewhat disinclined	Neutral	Somewhat no problem	Totally no problem	*No problem*
Last name and first name	18%	17%	16%	34%	16%	*50%*
Date of birth	21%	20%	20%	28%	11%	*39%*
Civil status	27%	17%	21%	22%	14%	*36%*
Origin	32%	14%	18%	20%	16%	*35%*
Sexual orientation	44%	11%	16%	14%	15%	*29%*
Religion	37%	15%	20%	15%	14%	*28%*
Address details	32%	34%	17%	13%	4%	*17%*
Political preference	55%	17%	16%	8%	5%	*13%*
Medical information	67%	18%	9%	4%	2%	*6%*
Financial information	71%	18%	7%	2%	1%	*3%*

To what extent are you prepared to share the personal information below with apps, websites and/or companies? (total sample N=4,547)

NO PROBLEM SHARING THE DATA BELOW WITH APPS, WEBSITES OR COMPANIES - SPLIT BY AGE

	16-24	25-34	35-44	45-54	55-64	65+	*Total*
Last name and first name	70%	62%	58%	50%	46%	28%	***50%***
Date of birth	59%	55%	43%	36%	32%	23%	***39%***
Civil status	51%	49%	37%	33%	31%	24%	***36%***
Origin	57%	53%	36%	32%	26%	21%	***35%***
Sexual orientation	45%	46%	29%	25%	22%	16%	***29%***
Religion	49%	46%	32%	23%	19%	12%	***28%***
Address details	17%	14%	14%	19%	21%	16%	***17%***
Political preference	22%	18%	13%	10%	9%	8%	***13%***
Medical information	12%	8%	5%	5%	4%	5%	***6%***
Financial information	6%	4%	3%	2%	1%	4%	***3%***

To what extent are you prepared to share the personal information below with apps, websites and/or companies? - % no problem (score 4 or 5 on a scale of 1 to 5) - Split by age (total sample N=4,547)

NO PROBLEM SHARING THE DATA BELOW WITH APPS, WEBSITES OR COMPANIES - SPLIT BY ATTITUDE

	It concerns me that companies are not transparent about what data they have about me		I think it's OK to share personal data if you get something in return (e.g. information and personalized service)	
	(Totally) disagree / neutral	**(Totally) agree**	(Totally) disagree / neutral	**(Totally) agree**
Last name and first name	51%	**50%**	44%	**66%**
Date of birth	43%	**38%**	33%	**54%**
Civil status	40%	**35%**	31%	**50%**
Origin	39%	**34%**	30%	**50%**
Sexual orientation	30%	**28%**	24%	**40%**
Religion	33%	**26%**	24%	**39%**
Address details	20%	**16%**	15%	**23%**
Political preference	16%	**11%**	11%	**18%**
Medical information	9%	**5%**	5%	**10%**
Financial information	4%	**3%**	2%	**6%**

To what extent are you prepared to share the personal information below with apps, websites and/or companies? - % no problem (score 4 or 5 on a scale of 1 to 5) - Split by attitude to privacy (total sample N=4,547)

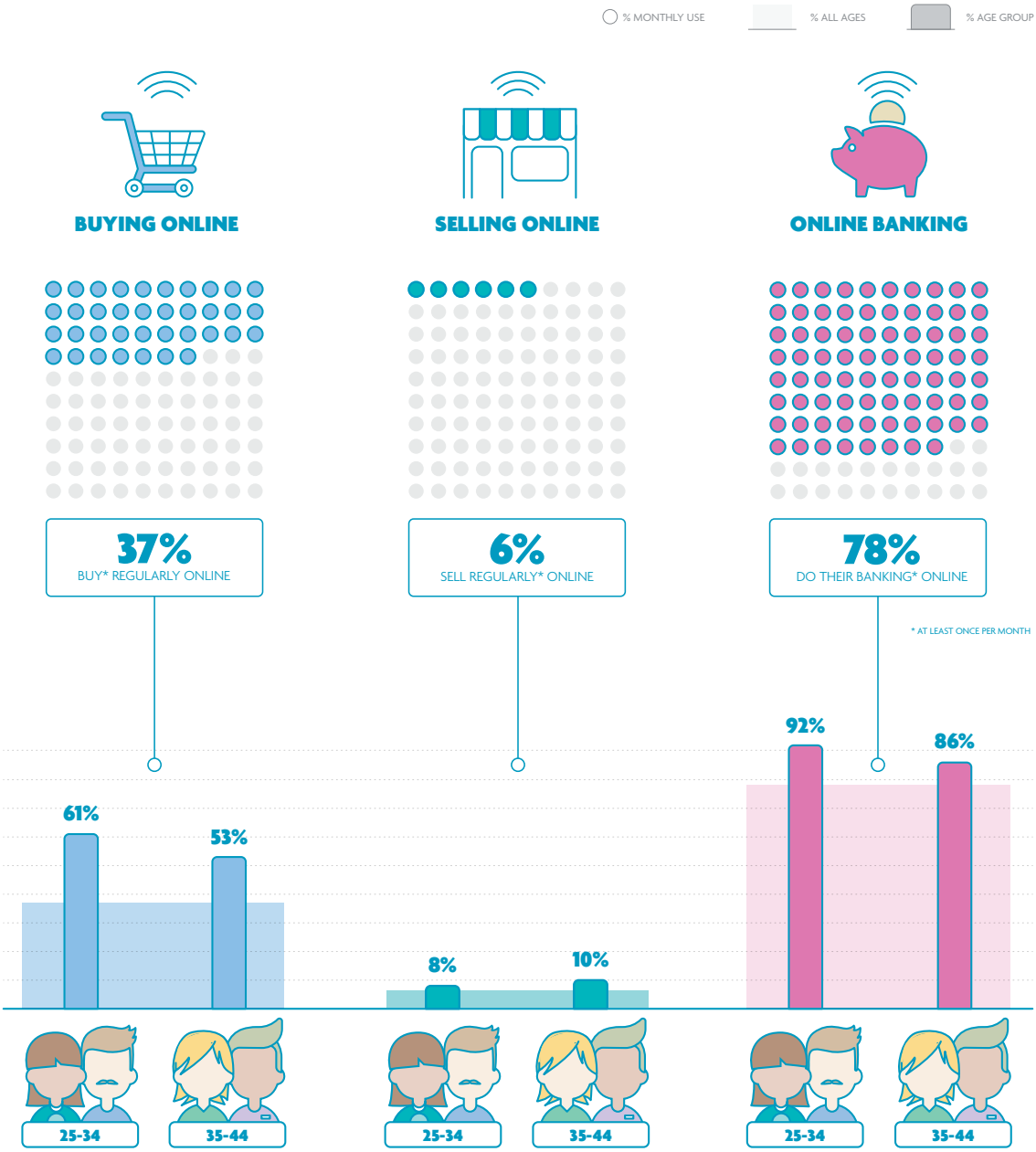
CHAPTER 6

E-COMMERCE, SHARING ECONOMY & MAKERS

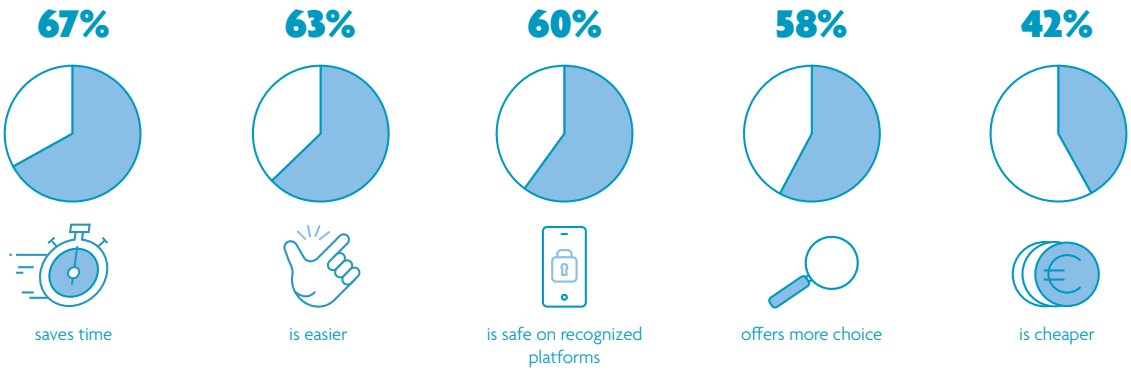
Positive attitude, still a great deal of unused potential in usage

E-COMMERCE

Highest among 25-44 year olds

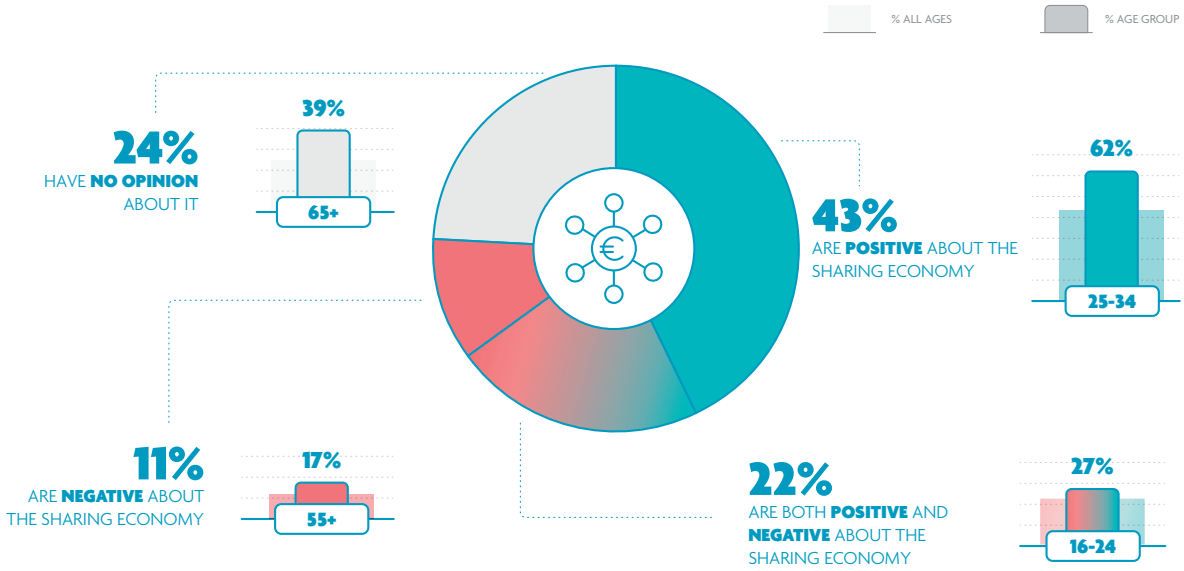


ATTITUDE TO ONLINE SHOPPING

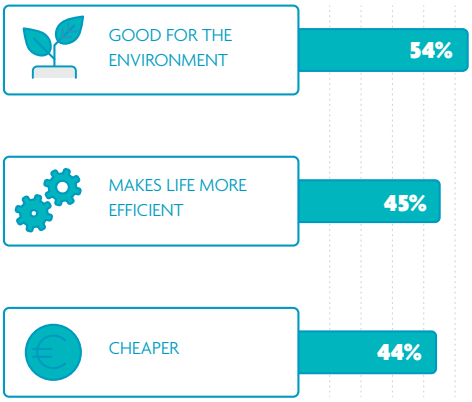


ATTITUDE TO THE SHARING ECONOMY

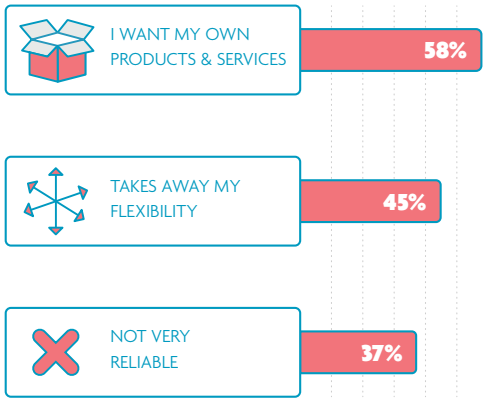
Flemings are cautiously positive, especially on account of the impact on the environment and efficiency



POSITIVE ASPECTS



NEGATIVE ASPECTS



SHARING PLATFORMS

Use is still very niche

CROWDFUNDING

10% 1%

SHARE HOUSE FOR SHORT PERIOD

14% 2%

CARE-SHARE WITH PRIVATE PERSON

7% 2%

SHARE BIKE THROUGH SHARING COMPANY

8%

NVT

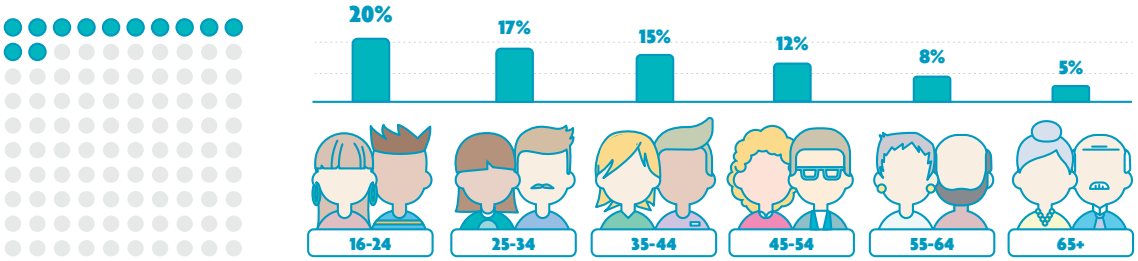
LEND THINGS TO PRIVATE PERSON

7% 4%

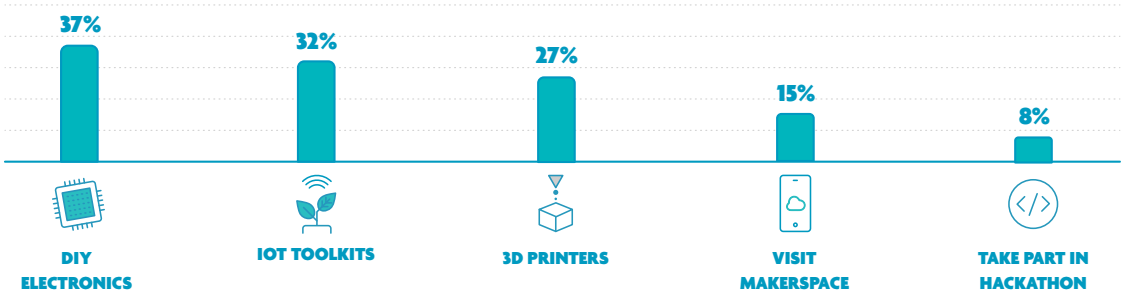
MAKERS

Highest proportion among youngest age group

12%
DESCRIBE THEMSELVES AS A MAKER



MOST COMMON MAKER ACTIVITIES:



E-COMMERCE, SHARING ECONOMY & MAKERS

The increased adoption and use of devices connected to the Internet also affect online economic activities. Almost two out of three Flemings say that they purchase something online every year, while for 37% of them, this is something they do every month. This is more than the 32% who, in 2017, stated that they bought something online each month. These figures come from Comeos, the Belgian commerce and services association[40]. In its study, Comeos found that 76% of the Belgian online population made purchases online each year, with 44% doing so monthly[41]. However, it has to be said that e-commerce in Belgium is struggling with a number of problems. This is according to UNCTAD, the UN body for trade and development, which says that Belgium scores poorly in terms of the reliability of package deliveries[42]. Comeos also states that €5.5 billion of the turnover from online transactions goes to foreign webshops such as Bol.com or Amazon. Five years ago, that figure was just €0.5 billion[43]. So growth in the number of online shoppers in Flanders does not automatically mean a rise in online sales for Belgian retail companies.

But people in Flanders can see the benefits of shopping online. More than two in three say that they save time by shopping online, while 63% say that online shopping is easier than going to a store. Six out of ten also say they trust online shopping to be secure – at least when it's done on recognized platforms. The only point where less than half of Flemings are convinced is whether it is cheaper to shop online (42%). Flemings aged between 25 and 44 are the most positive about online shopping. This attitude to buying things online is connected closely with online shopping behavior: the proportion of Flemings who shop online monthly is higher among those with positive attitudes to online shopping. If companies or webshops want to persuade people to buy more online, then it makes good sense to highlight the positive image of e-commerce.

There appear to be two main camps in Flanders when it comes to the sharing economy. 43% say they are positive to the sharing economy, while 46% are neutral (i.e. they have no opinion or have both a negative and positive attitude). Only 11% say that they are negative to the sharing economy. The highest threshold is the value that people attach to owning goods: 58% of those with negative feelings to the sharing economy say that they would rather buy and use their own products, while 45% are afraid that the sharing economy will take away part of their freedom and flexibility. With people who see the sharing economy as something positive, the reasons cited most often are the fact that it is good for the environment, that it makes life easier and more efficient – and that it is cheaper than owning everything. However, this positive attitude is not yet translating into the frequent use of sharing platforms. Sharing a room or accommodation with a private individual (for example via AirBnB) still has the highest score, with 14% of Flemings having used it in the past year as a customer and 2% as a provider. 7% of Flemings shared trips in cars, for example via Uber, as the customer, with 2% as the provider[44]. Bike-sharing systems such as Mobit or Blue-Bikes were used by 8% of Flemings in the past year. These figures are in line with what Profacts found in the "Consumer Connection Survey" study conducted on behalf of BD myShopi[45]; where it was reported that 17% of Belgians had used AirBnB and 9% Uber.

40 https://static.comeos.be/E-commerce_Belgium_2018.pdf
41 The difference here can be explained partly by a variation in sampling methods: with imec.digimeter, the target population is 16+ and was recruited both online and offline, whereas the Comeos online survey placed the upper limit at 70 years of age.
42 https://unctad.org/en/PublicationsLibrary/tn_unctad_ict4d12_en.pdf
43 https://www.tijd.be/ondernemen/retail/buitenlandse-e-commerce-pikt-5-5-miljard-euro-belgische-omzet-in/10070411.html
44 In Belgium, Uber is only available in Brussels.
45 https://www.bdmyshopi.com/nl/iedereen-zit-op-social-media-klopt-dat-wel

Around one in eight Flemings describe themselves as "makers"[46]. One striking observation is that DIY electronics (using platforms such as Arduino or Raspberry Pi) has a large group of users among these makers (15% use it regularly and a further 22% have done so on multiple occasions), but one-quarter of makers have never heard of it. For example, a 3D printer is considerably better known (5% of people who call themselves a 'maker' don't know what it is), but has significantly fewer regular users (8% regularly and 19% on multiple occasions). A limited number of makers said that they had taken part in hackathons several times (8%) or had visited a "makerspace" (15%).

The concept of "makers"[47] has gained greater resonance in Flanders since the "Team Scheire" series began on the Flemish television station Canvas[48]. In the show, Lieven Scheire brings together a team of scientists, designers, engineers and technology geeks (including Lynn Coorevits, innovation manager at imec.livinglabs) to come up with solutions for people wrestling with day-to-day problems as the result of a disability or disorder of some kind. The imec.digimeter survey was conducted before the first episode of Team Scheire was broadcast. This means we cannot test the assumption that the show has also convinced more people in Flanders to become makers[49], although hopefully the many promising responses will show this to be the case[50].

46 In the survey, the term "makers" is defined as follows: "Makers are people who like to experiment with new technologies (3D printing, sensors, etc.), either at home or in what is known as a 'makerspace' – i.e. somewhere professionals and hobbyists can invent, design and make things together."
47 https://www.canvas.be/team-scheire/over-makers-en-wetenschap
48 https://www.canvas.be/team-scheire
49 https://datanews.knack.be/ict/nieuws/hopelijk-kan-team-scheire-de-makers-mentaliteit-verspreiden-in-vlaanderen/article-analyse-1387217.html
50 https://www.humo.be/tv-reviews/395655/team-scheire-op-canvas

FREQUENCY OF BUYING/SELLING GOODS ONLINE

	Never	Seldom	Once or multiple times per year	Once or multiple times per month	Once or multiple times per week	Daily
Buy goods online	20%	17%	27%	31%	6%	0%
Sell goods online	48%	29%	18%	5%	1%	0%

How often do you carry out the activities below online? (total sample N=4,547)

BUY/SELL GOODS ONLINE AT LEAST ONCE PER MONTH - SPLIT BY AGE

	Buy goods online	Sell goods online
16-24	44%	6%
25-34	61%	8%
35-44	53%	10%
45-54	39%	6%
55-64	23%	3%
65+	14%	3%
Total	***37%***	***6%***

How often do you carry out the activities below online? - % at least once per month - Split by age group (total sample N=4,547)

FREQUENCY OF MANAGING BANKING ONLINE

	Never	Seldom	One or more times per year	One or more times per month	One or more times per week	Daily
Manage banking online	15%	5%	2%	24%	41%	14%

How often do you carry out the activities below online? (total sample N=4,547)

MANAGE BANKING ONLINE AT LEAST ONCE PER MONTH - SPLIT BY AGE

	Manage banking online
16-24	70%
25-34	92%
35-44	86%
45-54	83%
55-64	75%
65+	66%
Total	***78%***

How often do you carry out the activities below online? - % at least once per month - Split by age group (total sample N=4,547)

ATTITUDE TO ONLINE SHOPPING

	Totally disagree	Disagree	Neutral	Agree	Totally agree	*(Totally) agree*
Online shopping via recognized platforms is safe	5%	6%	29%	48%	12%	*60%*
Online shopping is cheaper	4%	13%	40%	34%	8%	*42%*
Online shopping saves time	4%	7%	22%	50%	18%	*67%*
Online shopping offers more choice	4%	10%	29%	41%	17%	*58%*
Online shopping is easier	4%	7%	25%	43%	20%	*63%*

To what extent do you agree with the statements below? [scale of 1 to 5] (total sample N=4,547)

ATTITUDE TO ONLINE SHOPPING - PROPORTION (TOTALLY) AGREE - SPLIT BY AGE GROUP

	16-24	25-34	35-44	45-54	55-64	65+	*Total*
Online shopping via recognized platforms is safe	65%	79%	74%	61%	54%	38%	***60%***
Online shopping is cheaper	47%	54%	49%	42%	37%	32%	***42%***
Online shopping saves time	74%	81%	75%	69%	64%	50%	***67%***
Online shopping offers more choice	69%	77%	70%	54%	48%	40%	***58%***
Online shopping is easier	69%	77%	74%	63%	56%	50%	***63%***

To what extent do you agree with the statements below? - % (totally) agree (4 or 5 on scale of 1 to 5) (total sample N=4,547)

BUY/SELL GOODS AT LEAST ONCE PER MONTH ONLINE - SPLIT BY ATTITUDE TO ONLINE SHOPPING

		Buy goods at least once per month online
Online shopping via recognized platforms is safe	Disagree/neutral	15%
	Agree	51%
Online shopping is cheaper	Disagree/neutral	26%
	Agree	52%
Online shopping saves time	Disagree/neutral	16%
	Agree	47%
Online shopping offers more choice	Disagree/neutral	19%
	Agree	50%
Online shopping is easier	Disagree/neutral	15%
	Agree	50%

How often do you carry out the activities below online? - % at least once per month - Split by attitude to online shopping (total sample N=4,547)
Example: 51% of those who agree that online shopping via recognized platforms is safe make purchases online at least once per month. Of those who do not agree or who are neutral to it, only 15% shop online each month.

OPINION OF THE SHARING ECONOMY

Very negative	3%
Somewhat negative	9%
Positive and negative	22%
Somewhat positive	28%
Very positive	15%
No opinion	24%

What is your opinion of the sharing economy? (total sample N=4,547)

OPINION OF THE SHARING ECONOMY - SPLIT BY AGE GROUP

	16-24	25-34	35-44	45-54	55-64	65+	*Total*
Positive attitude	48%	62%	59%	45%	34%	24%	***43%***
Negative attitude	6%	5%	8%	12%	17%	17%	***11%***
Positive and negative attitude	27%	20%	18%	23%	23%	21%	**22%**
No opinion	19%	13%	16%	21%	27%	39%	***24%***

What is your opinion of the sharing economy? - Split by age group (total sample N=4,547)

POSITIVE ASPECTS OF THE SHARING ECONOMY

The sharing economy is good for the environment	54%
The sharing economy makes life easier and more efficient	45%
The sharing economy makes like cheaper	44%
The sharing economy increases my feeling of being part of a group	17%
Other reason	4%

Why do you think the sharing economy is positive? Multiple answers are possible. (filter on who is positive to the sharing economy, N=2,951 or 65% of the sample)

NEGATIVE ASPECTS OF THE SHARING ECONOMY

I prefer to buy and use my own products	58%
The sharing economy takes away part of my freedom (flexibility)	45%
The sharing economy is not very reliable. I do not trust the services and/or goods it has to offer	37%
The sharing economy creates environmental problems instead of taking them away	14%
Other reason	12%

Why do you think the sharing economy is negative? Multiple answers are possible. (filter on who is positive to the sharing economy, N=1,501 or 33% of the sample)

KNOWLEDGE AND USE OF SHARING PLATFORMS

	As user / customer	As provider	Not used	Don't know
Crowdfunding (e.g. Kickstarter)	10%	1%	68%	21%
Shared house/room for short period with private individual (e.g.	14%	2%	73%	13%
Shared car journey with private individual (e.g. Uber)	7%	2%	77%	15%
Hired car from private individual	3%	1%	80%	16%
Shared car via sharing company (e.g. Cambio)	4%	1%	82%	14%
Shared bike via sharing company (e.g. Mobit)	8%	0%	79%	13%
Borrowed items from private individual (e.g. Peerby)	7%	4%	74%	17%
Had private individual carry out chores (e.g. Listminut)	4%	2%	77%	18%

Which of the services below did you use and/or offer in the past year? (total sample N=4,547)

WOULD YOU DESCRIBE YOURSELF AS A 'MAKER'?

	16-24	25-34	35-44	45-54	55-64	65+	*Total*
Yes	20%	17%	15%	12%	8%	5%	***12%***
No	80%	83%	85%	89%	92%	95%	***88%***

Would you describe yourself as a 'maker'? (total sample N=4,547)

'MAKER' ACTIVITIES - TOTAL POPULATION

		16-24	25-34	35-44	45-54	55-64	65+	*Total*
Used 3D printer	Don't know	1%	0%	1%	1%	1%	0%	*1%*
	Not yet	9%	6%	6%	5%	4%	2%	*5%*
	Once	5%	5%	4%	2%	1%	2%	*3%*
	Several times	4%	4%	2%	2%	2%	1%	*2%*
	Regularly	2%	2%	1%	1%	1%	0%	*1%*
	Total 'makers'	*20%*	*17%*	*15%*	*12%*	*8%*	*5%*	*12%*
Used DIY electronics (e.g. Raspberry Pi, Arduino)	Don't know	5%	3%	2%	2%	3%	3%	*3%*
	Not yet	6%	4%	4%	4%	3%	1%	*3%*
	Once	3%	2%	2%	1%	0%	0%	*1%*
	Several times	5%	5%	5%	1%	1%	0%	*3%*
	Regularly	2%	3%	2%	2%	1%	0%	*2%*
	Total 'makers'	*20%*	*17%*	*15%*	*12%*	*8%*	*5%*	*12%*
Used Internet of Things toolkits	Don't know	5%	2%	1%	2%	2%	1%	*2%*
	Not yet	8%	6%	5%	5%	4%	2%	*5%*
	Once	2%	2%	2%	1%	0%	1%	*1%*
	Several times	3%	4%	5%	3%	1%	0%	*3%*
	Regularly	2%	2%	1%	1%	1%	0%	*1%*
	Total 'makers'	*20%*	*17%*	*15%*	*12%*	*8%*	*5%*	*12%*
Took part in a Hackathon	Don't know	8%	4%	3%	3%	3%	3%	*4%*
	Not yet	10%	10%	10%	7%	4%	1%	*6%*
	Once	1%	1%	1%	0%	0%	0%	*1%*
	Several times	1%	1%	1%	1%	0%	1%	*1%*
	Regularly	0%	1%	0%	0%	0%	0%	*0%*
	Total 'makers'	*20%*	*17%*	*15%*	*12%*	*8%*	*5%*	*12%*
Visited a 'makerspace'	Don't know	7%	3%	3%	3%	3%	3%	*4%*
	Not yet	7%	9%	8%	6%	4%	1%	*5%*
	Once	2%	1%	2%	1%	1%	0%	*1%*
	Several times	3%	3%	2%	2%	1%	0%	*2%*
	Regularly	0%	0%	0%	0%	0%	0%	*0%*
	Total 'makers'	*20%*	*17%*	*15%*	*12%*	*8%*	*5%*	*12%*

Which of the 'maker' activities below have you tried? (total sample N=4,547)

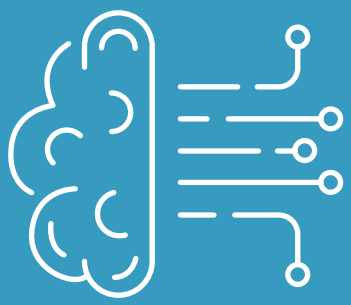
'MAKER' ACTIVITIES - FILTER BY MAKERS

		16-24	25-34	35-44	45-54	55-64	65+	*Total*
Used 3D printer	Don't know	5%	3%	5%	6%	9%	3%	***5%***
	Not yet	45%	38%	43%	48%	44%	40%	***43%***
	Once	23%	27%	29%	21%	18%	37%	***26%***
	Several times	19%	22%	15%	20%	20%	13%	***19%***
	Regularly	8%	10%	8%	6%	9%	7%	***8%***
Used DIY electronics (e.g. Raspberry Pi, Arduino)	Don't know	25%	15%	14%	21%	32%	65%	***25%***
	Not yet	29%	24%	26%	38%	37%	20%	***29%***
	Once	13%	13%	12%	11%	2%	3%	***10%***
	Several times	24%	30%	32%	10%	11%	8%	***22%***
	Regularly	9%	18%	16%	19%	18%	5%	***15%***
Used Internet of Things toolkits	Don't know	26%	11%	9%	13%	24%	25%	***17%***
	Not yet	38%	36%	37%	47%	45%	41%	***40%***
	Once	11%	14%	13%	7%	3%	23%	***11%***
	Several times	17%	26%	35%	22%	14%	7%	***22%***
	Regularly	8%	12%	7%	12%	15%	5%	***10%***
Took part in a Hackathon	Don't know	38%	24%	22%	30%	42%	68%	***33%***
	Not yet	49%	56%	66%	62%	52%	20%	***54%***
	Once	7%	7%	6%	1%	5%	0%	***5%***
	Several times	6%	8%	6%	6%	1%	12%	***6%***
	Regularly	0%	5%	1%	2%	1%	0%	***2%***
Visited a 'makerspace'	Don't know	37%	20%	20%	27%	37%	56%	***30%***
	Not yet	36%	51%	57%	49%	44%	28%	***46%***
	Once	11%	9%	11%	5%	8%	11%	***9%***
	Several times	14%	18%	11%	18%	9%	3%	***13%***
	Regularly	3%	2%	1%	1%	4%	3%	***2%***

Which of the 'maker' activities below have you tried? (filter on who describes themselves as a maker N=546 or 12% of the sample)

CHAPTER 7

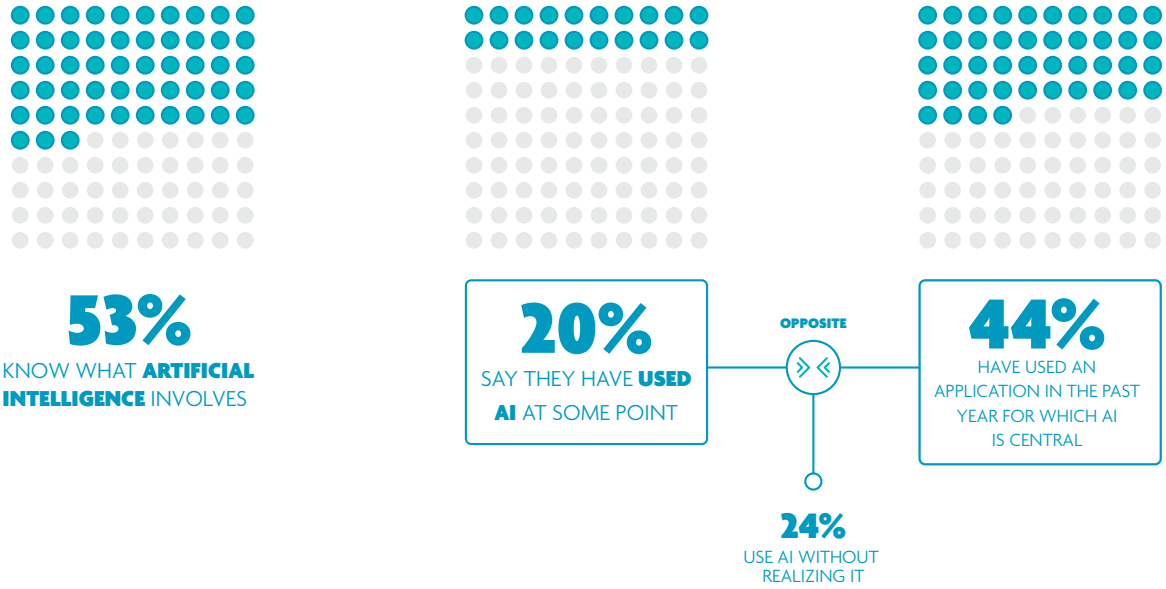
ARTIFICIAL INTELLIGENCE



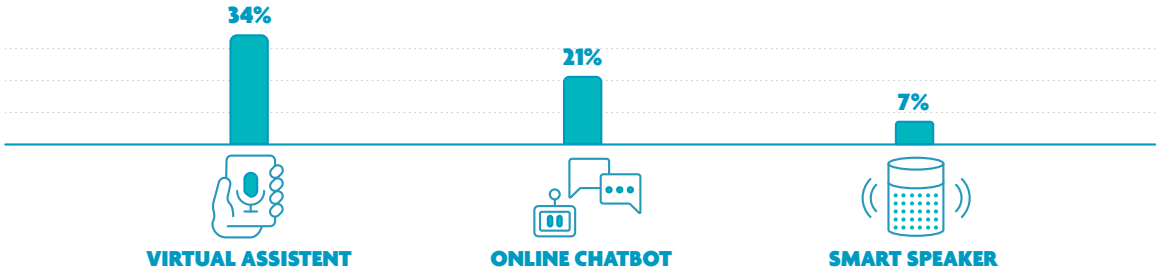
Positive attitude, but underestimation of applications used in

KNOWLEDGE AND USE OF AI

A technology people use without realizing it

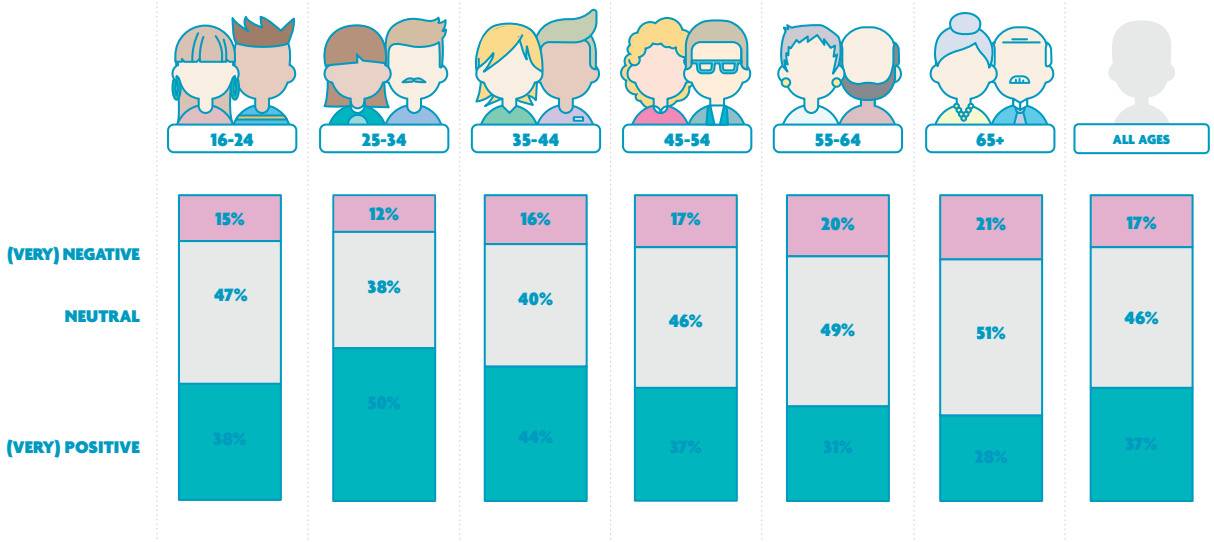


Most common use of artificial intelligence



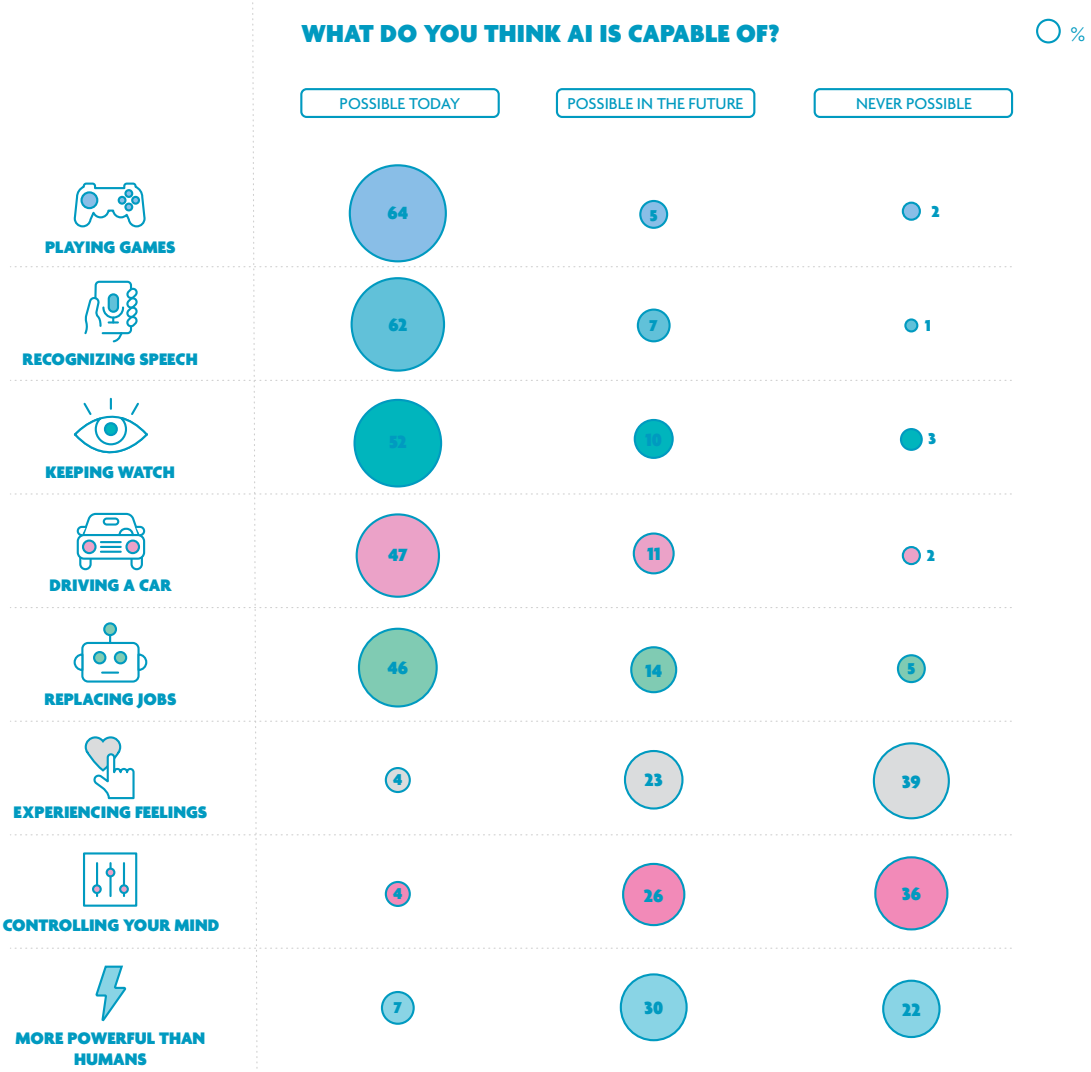
ATTITUDE TO ARTIFICIAL INTELLIGENCE

What do Flemings think about AI?



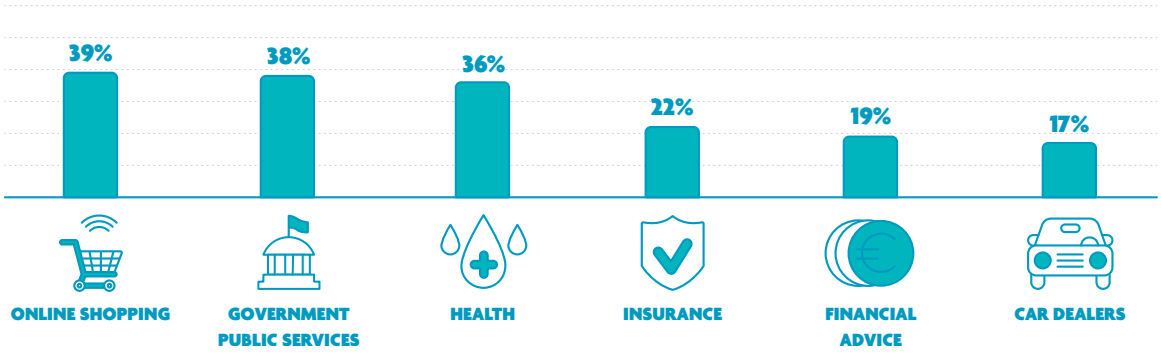
POSSIBILITIES AND POTENTIAL

From gaming to replacing people in their job



AI APPLICATIONS PEOPLE FEEL COMFORTABLE WITH

Online shopping, personalized information and better diagnoses



ARTIFICIAL INTELLIGENCE

Artificial intelligence (AI) is an area where significant progress has been made in recent years[51]. AI encompasses systems that are capable of interpreting human speech and interacting with humans. These include voice-activated virtual assistants such as Siri, or chatbots on websites. One striking example of this was the demonstration put on by Google Duplex in May 2018 in which a virtual assistant was able to make an appointment with the hairdresser and book a table at a restaurant, entirely autonomously[52]. The virtual assistant called the businesses in question and embarked on a conversation that sounded very natural (including typical interjections such as 'mhmm' to show that it agreed with something or had understood a point being made, with the occasional 'euh' sound to show that it was thinking). It was also able to respond properly if the person at the other end of the line asked an additional question. Another application in which AI has been experimented with frequently is to take on other people in a competition or game. First there was Watson, from IBM, which in 2011 convincingly won against the two best players ever of the quiz game Jeopardy[53]. In 1996, Deep Blue (also from IBM) won a game against the chess grandmaster, Garry Kasparov[54]. The performance of AlphaGo (Deepmind, a division of Alphabet (parent company of Google)), which in 2015 beat some of the specialists in the game 'Go', was seen as a milestone[55]. 'Go' is considered to be one of the most complex of all games. The rules themselves are pretty straightforward, but the number of possible moves is gigantic (one joke says that there are more possible moves in 'Go' than there are atoms in the universe), which makes it impossible to program all of the moves possible beforehand. This means that the computer itself has to learn which move is most appropriate in a given situation.

A point that needs to be made in each of these developments is that each one involves a strictly defined area. As complex as a game such as 'Go' may be, it still remains a game with clear playing rules. The same goes for the demo of Google Duplex: making an appointment or a booking was impressive as far as it goes, but it was still a standard situation and cannot be compared with a spontaneous conversation. According to Professor Luc Steels, founder of the AI lab at VUB, AI has still not reached the level of a two-year-old child, which understands things far better in the complex world around us[56].

These advances in AI also receive extensive coverage in the media, yet for many Flemings, AI remains a very vague concept. Although more than half of people in Flanders claim to understand what AI is all about (53%), when they are asked to mention applications of AI that Flemings have already used, there are striking discrepancies in their answers. When asked whether they have ever used AI applications, only 20% answered 'yes'. However, when we listed a number of possible applications (virtual assistant, smart speaker or chatbot), 44% answered that they had used at least one of these applications in the past year. This indicates that AI in itself is a terms that many Flemings understand, although they underestimate their application. That is also something specific to AI, given that it is something invisible that runs in the background and provides natural interaction between human being and computer. As a result, few users dwell on the fact that AI may be involved in applications that they use. This also brings up an ethical issue: to what extent do users need to be aware that AI is involved? For instance, should companies working with chatbots state explicitly that it is a computer-controlled interaction and hence no conversation is taking place with an actual person? This is a question that also came to the fore when Google Duplex was presented: should an AI assistant always make it clear that it is a virtual assistant and not a person[57]?

In view of the fact that AI remains just a vague concept for many people, it is no wonder that almost half of the people in Flanders have a neutral attitude to it. Having said that, we can see that more Flemings are positive about AI (38%) than negative (17%). This attitude has an effect on the possibilities that people see for AI. Anyone who views AI negatively will state more often that certain applications (such as solving problems autonomously, thinking logically or mimicking human communication) will never be possible than someone who has a positive attitude to AI. Conversely, we can see that people who view AI positively are more than convinced that AI will ever be more powerful than humans, compared with people who view AI negatively.

51 In the questionnaire, artificial intelligence was described as follows: "Artificial intelligence (AI) is intelligence used by machines, software and devices to solve problems autonomously. In doing so, AI imitates the thinking ability of a human being. However, the devices are not aware of the tasks that they carry out. The follow algorithms and recognize patterns. By learning from their own mistakes, they produce a better result (machine learning)."

52 https://www.theverge.com/2018/5/8/17332070/google-assistant-makes-phone-call-demo-duplex-io-2018

53 https://www.techrepublic.com/article/ibm-watson-the-inside-story-of-how-the-jeopardy-winning-supercomputer-was-born-and-what-it-wants-to-do-next/

54 https://www.scientificamerican.com/article/20-years-after-deep-blue-how-ai-has-advanced-since-conquering-chess/

55 https://deepmind.com/research/alphago/

56 http://www.standaard.be/cnt/dmf20160309_02174239

57 https://techcrunch.com/2018/05/10/duplex-shows-google-failing-at-ethical-and-creative-ai-design/

Three out of ten Flemings say they would not feel comfortable about any AI application in business or commerce. The tipping point is around 45 years of age: people over 45 tend to have more problems with it. People feel least comfortable when AI is used by car dealers (to make recommendations about which car would suit you best, based on your mobility profile) and financial institutions (financial advice and insurance). Sensitivity concerning financial data is also discussed in the section on Privacy. The applications where people feel most comfortable are customized recommendations for online shopping, better and more personalized information from government public services, and better diagnoses and health recommendations. Whereas these last two points are fairly evenly spread across the various age groups, there is a strongly negative link with age in AI applications for online shopping: the younger the person, the more comfortable they feel about AI.

KNOWLEDGE AND USE OF ARTIFICIAL INTELLIGENCE (AI)

	Knowledge	Use
Yes	53%	20%
No	26%	54%
I'm not entirely sure	21%	25%

Do you know what artificial intelligence (AI) means? (total sample N=4,547)
Have you ever used artificial intelligence (AI) applications? (total sample N=4,547)

USE/EXPERIENCE OF AI APPLICATIONS - SPLIT BY AGE GROUP

	16-24	25-34	35-44	45-54	55-64	65+	*Total*
A virtual assistant	53%	52%	46%	35%	22%	11%	***34%***
A smart speaker	12%	10%	8%	8%	5%	3%	***7%***
An online chatbot	30%	40%	32%	18%	12%	4%	***21%***
None of the above	35%	34%	42%	56%	70%	82%	***56%***

Which of the applications below have you used or had experience of in the past year? - Split by age group (total sample N=4,547)

ATTITUDE TO AI - SPLIT BY AGE GROUP

	16-24	25-34	35-44	45-54	55-64	65+	*Total*
Very negative	3%	2%	2%	4%	5%	4%	***3%***
Fairly negative	12%	10%	14%	13%	15%	17%	***14%***
Neutral	47%	38%	40%	46%	49%	51%	***46%***
Fairly positive	29%	41%	38%	34%	27%	24%	***32%***
Very positive	9%	10%	7%	4%	4%	4%	***6%***

What is your attitude to artificial intelligence? - Split by age group (total sample N=4,547)

POSSIBILITIES AND POTENTIAL OF AI

	Possible today	Possible in the near future	Possible in the distant future	Will never be possible	No idea/no opinion
Recognizing and interpreting speech	62%	17%	7%	1%	13%
Solving problems independently (without the intervention of a human)	33%	28%	18%	5%	16%
Driving cars	47%	29%	11%	2%	12%
Thinking logically	36%	21%	16%	9%	17%
Mimicking human communication	41%	24%	14%	5%	17%
Monitoring people (e.g. smart cameras that pass on information about suspicious actions)	52%	21%	10%	3%	15%
More powerful than humans	7%	17%	30%	22%	24%
Controlling your mind	4%	10%	26%	36%	24%
Experiencing feelings	4%	11%	23%	39%	22%
Replacing humans in their job	46%	23%	14%	5%	13%
Playing games (gaming)	64%	14%	5%	2%	15%

In your opinion, which of the things below is artificial intelligence capable of? (total sample N=4,547)

WILL NEVER BE POSSIBLE WITH AI - SPLIT BY AGE GROUP

	16-24	25-34	35-44	45-54	55-64	65+	*Total*
Recognizing and interpreting speech	2%	1%	1%	1%	1%	1%	*1%*
Solving problems independently (without the intervention of a human)	4%	3%	5%	5%	8%	6%	*5%*
Driving cars	3%	1%	2%	2%	2%	2%	*2%*
Thinking logically	7%	5%	6%	10%	14%	12%	*9%*
Mimicking human communication	5%	5%	5%	3%	6%	4%	*5%*
Monitoring people (e.g. smart cameras that pass on information about suspicious actions)	4%	3%	3%	1%	3%	4%	*3%*
More powerful than humans	24%	21%	22%	21%	23%	24%	*22%*
Controlling your mind	41%	41%	37%	38%	32%	31%	*36%*
Experiencing feelings	32%	39%	41%	42%	42%	38%	*39%*
Replacing humans in their job	7%	5%	4%	4%	5%	5%	*5%*
Playing games (gaming)	3%	2%	1%	1%	2%	2%	*2%*

In your opinion, which of the things below is artificial intelligence capable of? - % "Will never be possible" - Split by age group (total sample N=4,547)

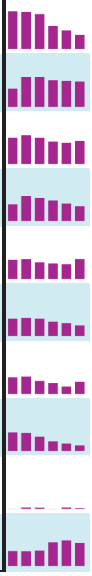
WILL NEVER BE POSSIBLE WITH AI - SPLIT BY ATTITUDES TO AI

	(Very) negative	Neutral	(Very) positive	*Total*
Recognizing and interpreting speech	1%	1%	1%	*1%*
Solving problems independently (without the intervention of a human)	8%	7%	2%	*5%*
Driving cars	3%	3%	0%	*2%*
Thinking logically	15%	11%	5%	*9%*
Mimicking human communication	7%	5%	3%	*5%*
Monitoring people (e.g. smart cameras that pass on information about suspicious actions)	4%	4%	2%	*3%*
More powerful than humans	18%	23%	24%	*23%*
Controlling your mind	37%	34%	38%	*36%*
Experiencing feelings	46%	38%	37%	*39%*
Replacing humans in their job	5%	6%	3%	*5%*
Playing games (gaming)	2%	2%	1%	*2%*

In your opinion, which of the things below is artificial intelligence capable of? - % "Will never be possible" - Split by attitude to AI (total sample N=4,547)

COMFORTABLE WITH THE USE OF AI - SPLIT BY AGE GROUP

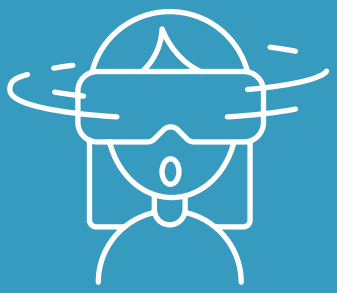
	16-24	25-34	35-44	45-54	55-64	65+	*Total*
Online shopping (personalized recommendations)	56%	55%	51%	34%	27%	21%	***39%***
Government public services (more and better personalized information)	27%	43%	44%	39%	38%	37%	***38%***
Health (diagnosis, health recommendations)	39%	43%	39%	34%	32%	34%	***36%***
Telecoms (offers tailored to your usage)	25%	37%	34%	30%	26%	22%	***28%***
Banking personalized bank products)	28%	29%	25%	23%	22%	30%	***26%***
Insurance (personalized policies based on analysis of your day-to-day habits)	26%	27%	26%	21%	19%	16%	***22%***
Financial advice (personalized investment advice)	24%	26%	19%	16%	11%	18%	***19%***
Car dealers (recommendations for a car that fits your mobility profile)	27%	27%	21%	14%	11%	8%	***17%***
Something else	1%	3%	2%	1%	2%	1%	***2%***
None of the above	22%	22%	23%	35%	38%	34%	***30%***



In which of the situations below would you feel comfortable if a company used AI to be able to offer you a better service? - Split by age group (total sample N=4,547)

CHAPTER 8

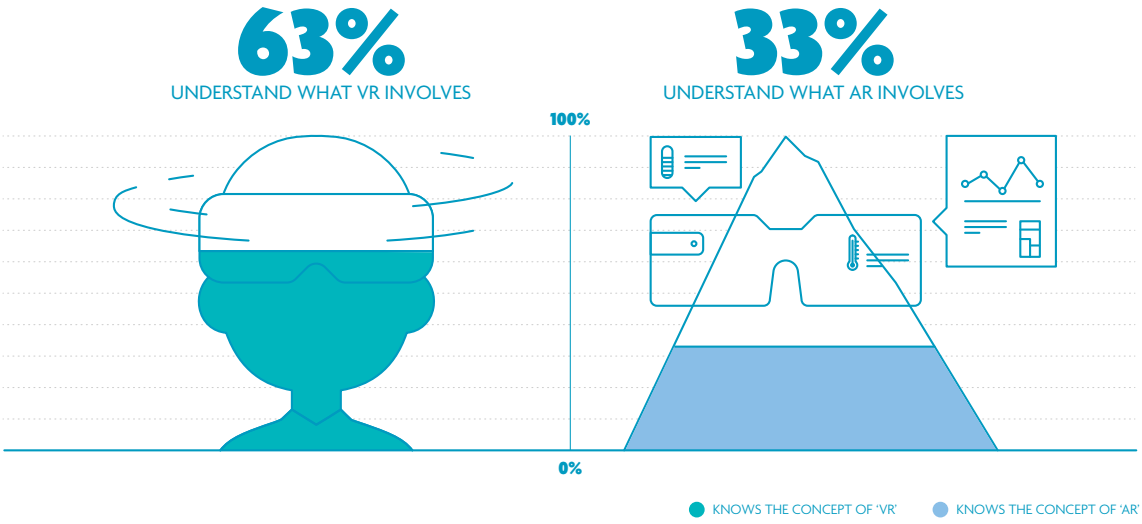
VIRTUAL REALITY & AUGMENTED REALITY

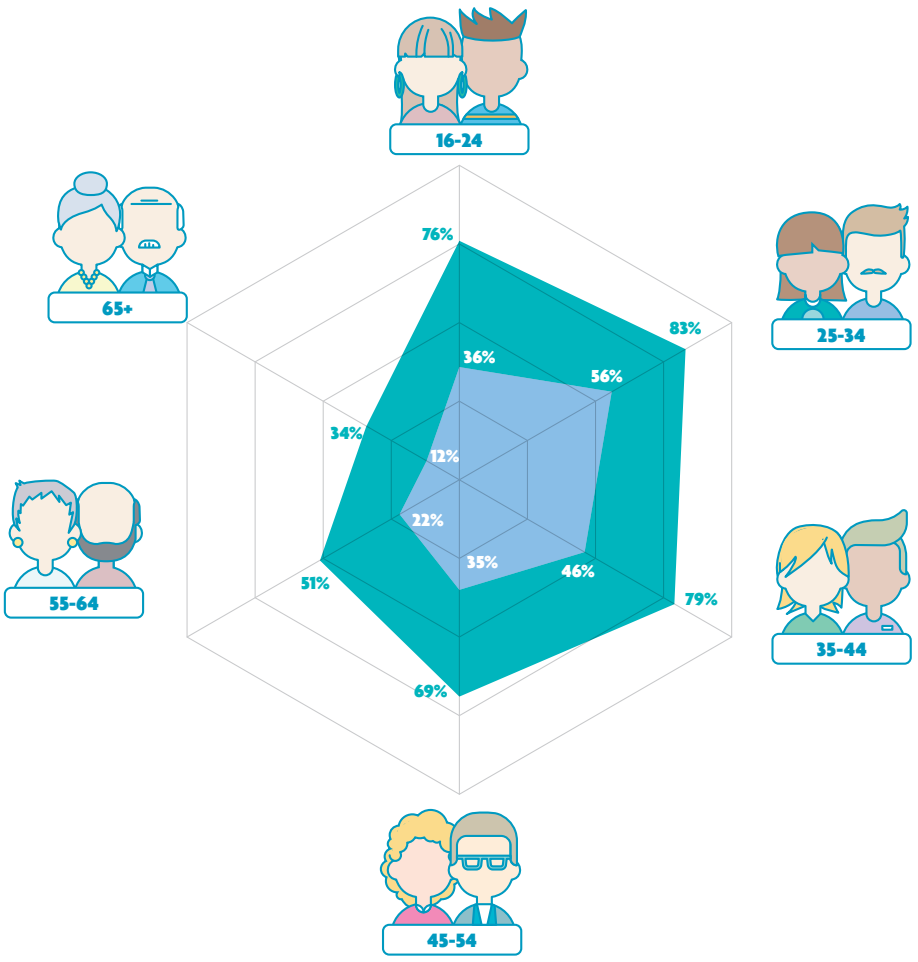


Major differences in knowledge and applications

KNOWLEDGE OF VIRTUAL REALITY (VR) AND AUGMENTED REALITY (AR)

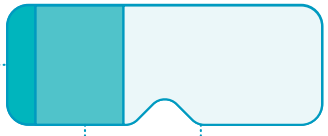
VR already a broadly known concept, AR a good deal less well known in every age group





OWNS VR

9%
OWN VR GLASSES

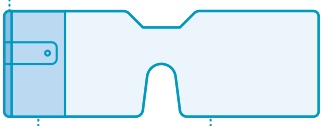


28%
NO VR GLASSES, BUT HAVE TRIED THEM

63%
NO VR GLASSES AND HAVE NEVER TRIED THEM

OWNS AR

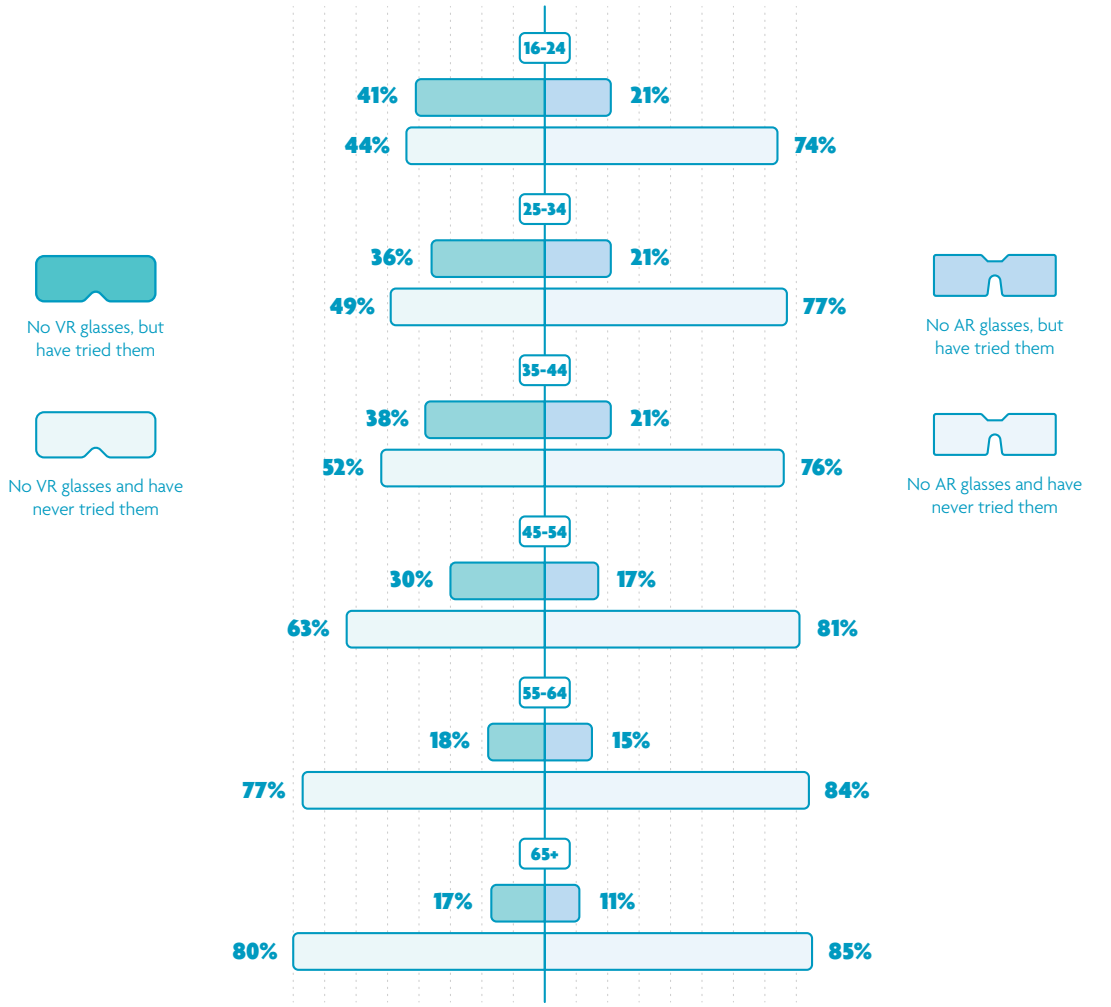
3%
OWN AR GLASSES



17%
NO AR GLASSES, BUT HAVE TRIED THEM

63%
NO AR GLASSES AND HAVE NEVER TRIED THEM

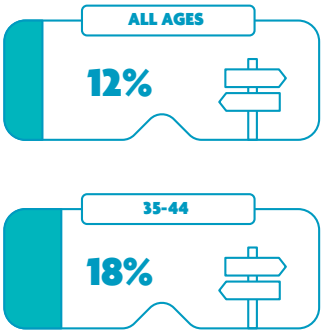
Split by age group



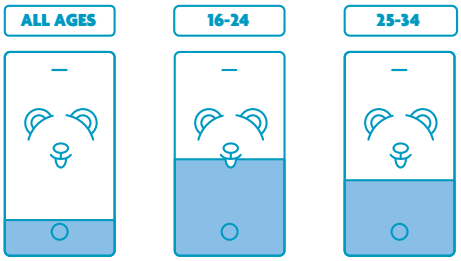
APPLICATIONS

Which VR or AR applications have you already used?

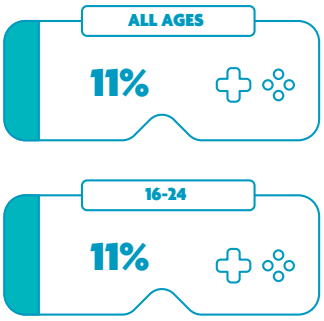
VR TOURS



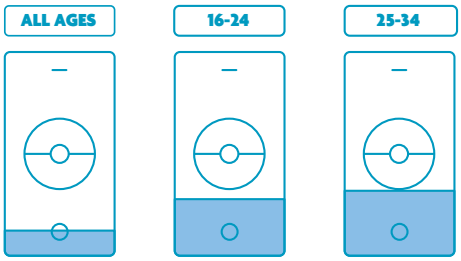
AR INTERACTIVE FACE FILTERS



VR GAMES

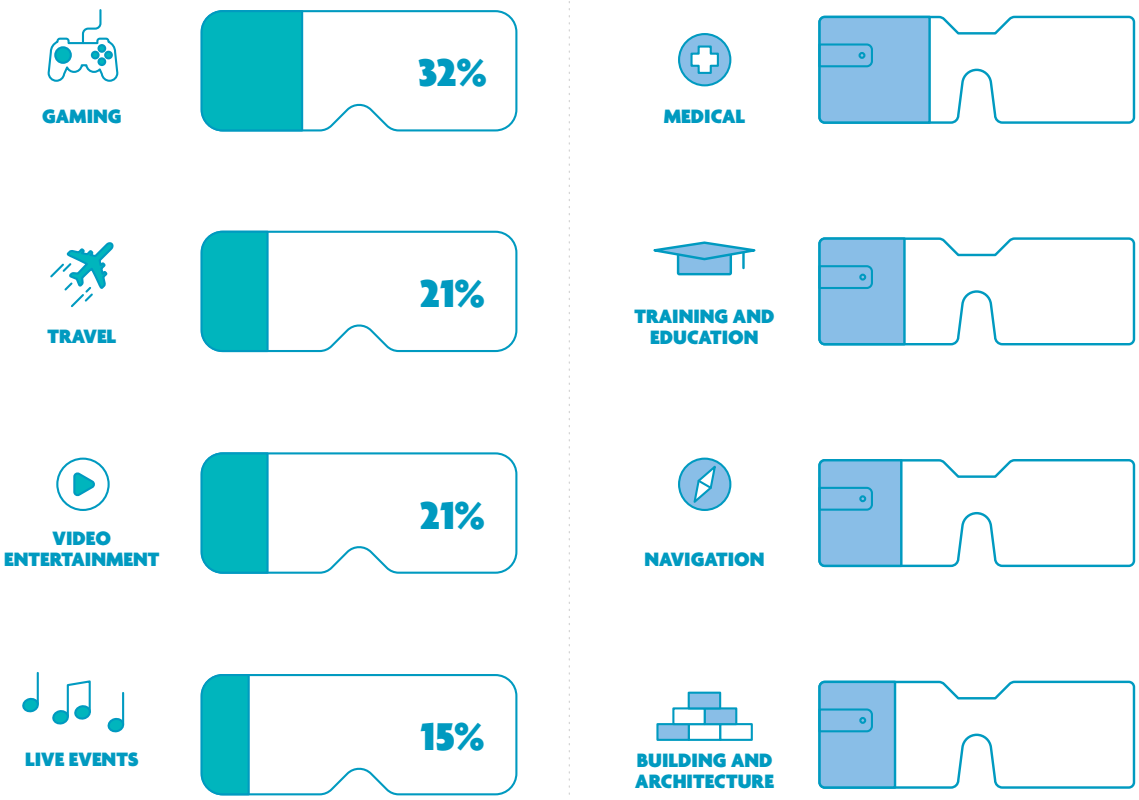


AR GAME APPS



MOST INTERESTING APPLICATIONS

VR is linked most with entertainment,
AR more of a professional and educational use



VIRTUAL REALITY & AUGMENTED REALITY

Virtual Reality (VR)[58] has become a widely known concept in Flanders. 63% claim that they know what VR is. With Augmented Reality (AR)[59], on the other hand, only 33% say they know what it is. And only 29% claim to know the difference between the two. This difference applies across all age groups. AR is also known a good deal better in the younger age groups (56% of 25-34 year olds know about AR) than in the older age brackets (12% of over-65s about what AR is). Yet these figures are significantly lower than knowledge of VR (83% among 25-34 year olds and 34% for the over-65s).

Nearly one in ten people in Flanders say they have a VR headset at home, although this is usually just a holder where you can 'park' your smartphone, such as Google Cardboard. The open answers also often stated 'other' when it involved a holder they had received in a commercial campaign or at an event. At the moment, VR headsets connected to a powerful computer (such as HTC Vive) or with a built-in processor (like Oculus Go) are very rare in Flemish households. Almost three out of ten Flemings state that they do not have a VR headset at home, but that they had used one somewhere else (such as during an event or at a friend's home). Tours in VR and games are the most frequently mentioned applications that people have tried out.

Given the low level of familiarity with AR, it also comes as no surprise that only 3% say that they have a set of AR glasses[60]. AR also mainly involves smartphone applications at the moment. Examples are interactive face filters on Snapchat or AR games such as Pokémon Go.

When we compare perceptions about the potential of VR and AR, we can see that VR scores more highly for entertainment and for enhancing a perception/experience (such as trying clothes on a virtual image of yourself before you buy them online), whereas AR scores better in more professional, functional and educational applications[61]. For instance, VR gaming is mentioned the most as an area where some form of added value is expected, followed by medical applications (for example, carrying out a medical procedure on a virtual patient), training and education (such as a simulation on how people lived in a certain period), video entertainment (for instance being more actively involved in a series) and travel (for example making a virtual visit first to a hotel before making a booking). AR on the other hand is mainly attributed to have major potential for the medical sector (such as a specialist passing on instructions remotely during an operation that are then projected on to the patient's body), as well as in training and education (for example automatically recognizing trees and plants as the pupil looks at them using a smartphone camera or through AR glasses) and for navigation (such as following the route projected on to the road).

58 The following description of VR was used in the questionnaire for the questions about knowledge of the concepts of VR and AR: "With Virtual Reality (or 'VR') you put on a pair of glasses that cut you off totally from your surroundings and which give you the sensation of experiencing images (which track the movements of your head) and sounds as though you were somewhere different, such as on a journey, on stage during a performance or in the middle of a game or film scene."

59 The following description of AR was used in the questionnaire for the questions about knowledge of the concepts of VR and AR: "With Augmented Reality (or 'AR') you use a set of glasses or the screen of your smartphone to look at your real surroundings, but to which fictitious elements have been added. So you are not cut off from the real environment as you are with VR. Imagine that you are standing on a piece of undeveloped building land. With AR you can look at this empty piece of land and then make a mock-up of a house appear on it so that you can see how the house fits within that piece of land. In this example, the building plot is the true environment and the house a fictitious element projected on to it."

60 This 3% is probably an overestimate. Most of these 3% indicated that they owned 'another type of glasses' rather than those that were listed and which they could specify in a text box. These answers were evaluated and those answers that didn't correspond with AR glasses were disregarded. But some answers could not be attributed with certainty to AR. For example, we often saw that they had a holder for inserting a smartphone, which would give them AR glasses. Although this is probably a wrong categorization and they probably meant Google Cardboard-type VR glasses, we could not exclude them actually being AR glasses (or a mix of AR/VR, depending on the application on the smartphone).

61 Also see https://blog.globalwebindex.com/chart-of-the-week/augmented-virtual-reality/, in which entertainment and gaming are mainly seen as the most important applications for VR, while AR is viewed more for industry-oriented applications.

KNOWLEDGE OF THE CONCEPTS OF VIRTUAL REALITY (VR) AND AUGMENTED REALITY (AR)

	Yes	Not entirely sure	No
Virtual Reality (VR)	63%	16%	21%
Augmented Reality (AR)	33%	24%	43%
The difference between VR and AR	29%	29%	43%

Do you understand what Virtual Reality (VR) is all about? (total sample, N=4,547)
Do you understand what Augmented Reality (AR) is all about? (total sample, N=4,547)
Is the difference between Augmented Reality (AR) and Virtual Reality (VR) clear for you? (total sample, N=4,547)

KNOWLEDGE OF THE CONCEPTS OF VIRTUAL REALITY (VR) AND AUGMENTED REALITY (AR) - SPLIT BY AGE GROUP

		16-24	25-34	35-44	45-54	55-64	65+	*Total*
Virtual Reality (VR)	Yes	76%	83%	79%	69%	51%	34%	***63%***
	Not entirely sure	10%	9%	11%	18%	19%	24%	***16%***
	No	14%	8%	10%	14%	30%	42%	***21%***
Augmented Reality (AR)	Yes	36%	56%	46%	35%	22%	12%	***33%***
	Not entirely sure	25%	20%	23%	25%	28%	25%	***24%***
	No	39%	24%	32%	40%	50%	64%	***43%***
The difference between VR and AR	Yes	33%	51%	43%	29%	20%	8%	***29%***
	Not entirely sure	29%	23%	25%	33%	29%	31%	***29%***
	No	38%	26%	32%	38%	52%	61%	***43%***

Do you understand what Virtual Reality (VR) is all about? - Split by age group (total sample, N=4,547)
Do you understand what Augmented Reality (VR) is all about?- Split by age group (total sample, N=4,547)
Is the difference between Augmented Reality (AR) and Virtual Reality (VR) clear for you? - Split by age group (total sample, N=4,547)

OWN VR HEADSET

	16-24	25-34	35-44	45-54	55-64	65+	Total
I do not have a VR headset myself, but I have worn one	41%	36%	38%	30%	18%	17%	***28%***
I do not have a VR headset myself and have never worn one	44%	49%	52%	63%	77%	80%	***63%***
Google Cardboard	6%	8%	3%	3%	2%	0%	***3%***
Sony Playstation VR	4%	3%	3%	1%	0%	0%	***2%***
Samsung Gear VR	2%	2%	2%	1%	1%	0%	***1%***
Oculus Rift	1%	2%	1%	0%	0%	0%	***1%***
HTC Vive	2%	1%	1%	0%	0%	0%	***1%***
Oculus Go	0%	0%	1%	0%	0%	0%	***0%***
Google Daydream View	1%	0%	0%	0%	0%	0%	***0%***
Other	2%	2%	1%	3%	2%	2%	***2%***

Do you have Virtual Reality (VR) glasses at home? If yes, which ones? Multiple answers possible - Split by age group (total sample N=4,547)

VR APPLICATIONS USED

	16-24	25-34	35-44	45-54	55-64	65+	*Total*
VR tours	9%	11%	18%	13%	10%	10%	***12%***
VR games	26%	20%	16%	8%	3%	1%	***11%***
VR video entertainment	19%	14%	11%	7%	3%	3%	***9%***
Something else	5%	5%	4%	4%	3%	2%	***3%***
None of the above	56%	62%	63%	75%	85%	86%	***73%***

Which of the VR (Virtual Reality) applications below have you used in the past year? - Split by age group (total sample N=4,547)

OWN AR GLASSES

	16-24	25-34	35-44	45-54	55-64	65+	*Total*
I do not have AR glasses at home, but have worn them	21%	21%	21%	17%	15%	11%	***17%***
I do not have AR glasses at home and have never worn	74%	77%	76%	81%	84%	85%	***80%***
Microsoft Hololens	1%	1%	0%	0%	0%	0%	***0%***
Google Glass	2%	1%	1%	0%	0%	1%	***1%***
Other	2%	1%	2%	2%	1%	3%	***2%***

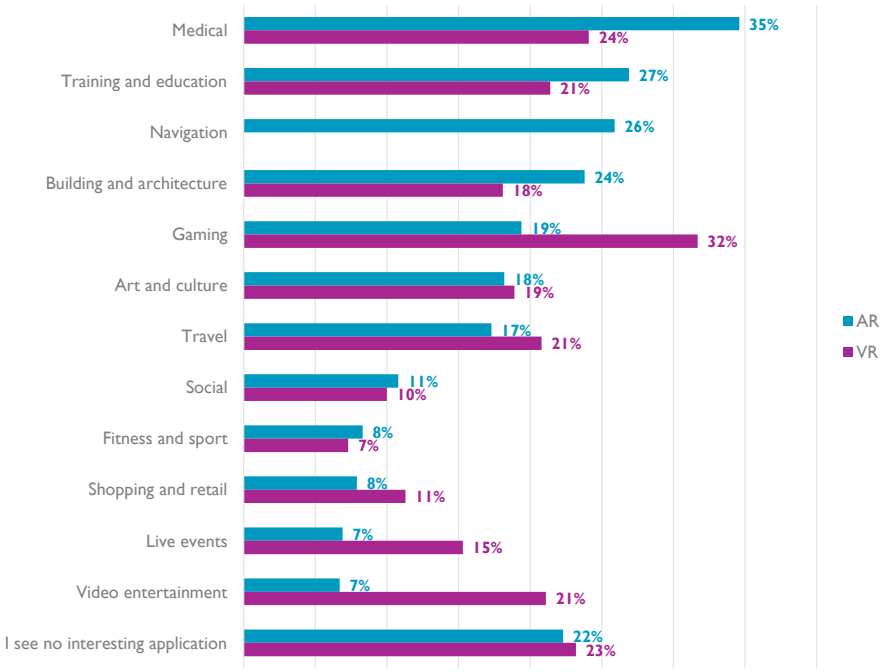
Do you have Augmented Reality (AR) glasses at home? If so, which ones? Multiple answers possible - Split by age group (total sample N=4,547)

AR APPLICATIONS USED

	16-24	25-34	35-44	45-54	55-64	65+	*Total*
Interactive face filters in social media apps (e.g. Snapchat)	46%	36%	20%	9%	2%	2%	***17%***
AR game apps (e.g. Pokémon go)	27%	31%	13%	7%	2%	1%	***12%***
AR tours (e.g. in a museum)	9%	12%	15%	9%	11%	11%	***11%***
Something else	2%	3%	2%	3%	2%	1%	***2%***
None of the above	44%	46%	65%	79%	85%	87%	***70%***

Which of the AR (Augmented Reality) applications below have you used in the past year? - Split by age group (total sample N=4,547)

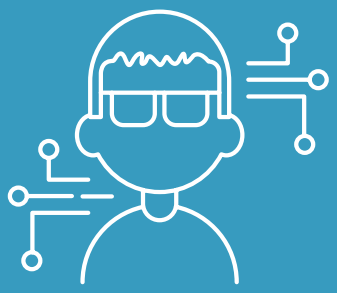
MOST INTERESTING APPLICATIONS - AR VERSUS VR



In your opinion, what are the 3 most interesting applications for AR (Augmented Reality)? (total sample N=4,547)
In your opinion, what are the 3 most interesting applications for VR (Virtual Reality)? (total sample N=4,547)

CHAPTER 9

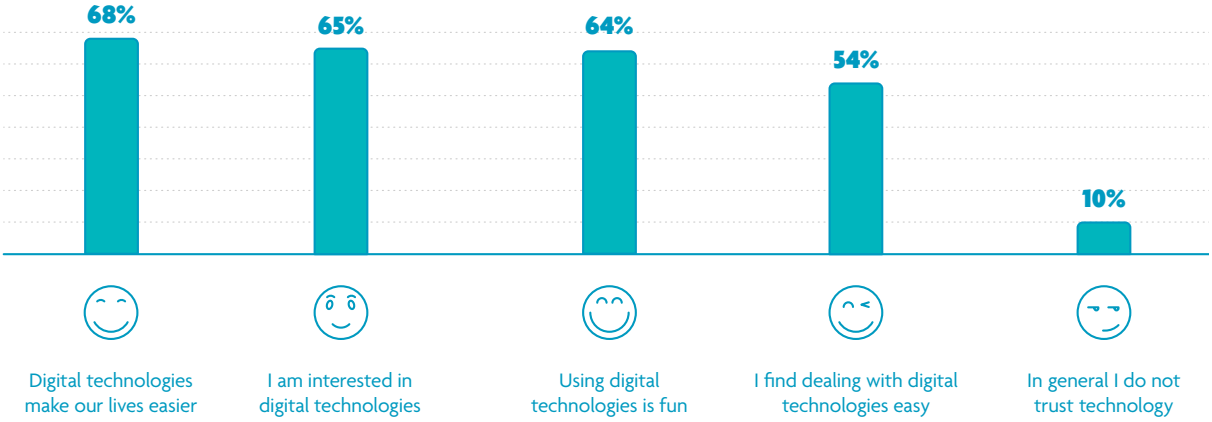
ATTITUDES TO TECHNOLOGY



Strong interest in technology
Rise in self-regulation of smartphone usage

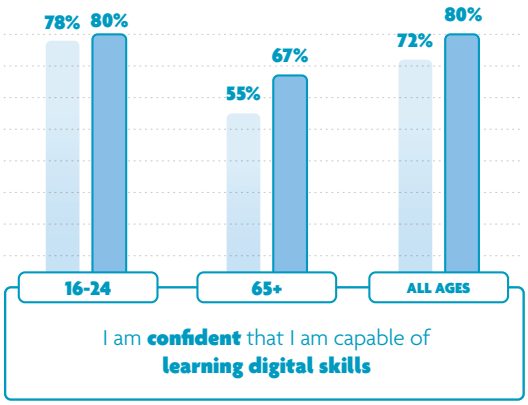
ATTITUDE TO TECHNOLOGY

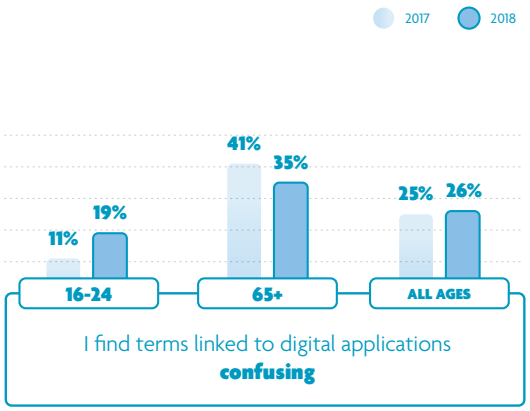
Strong interest and belief in technology, low level of mistrust

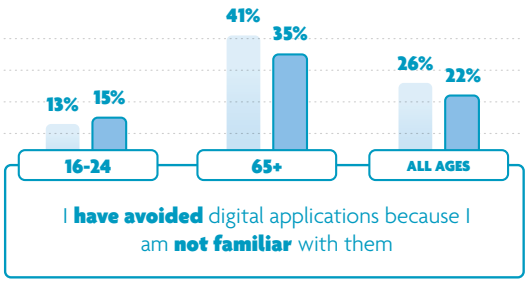


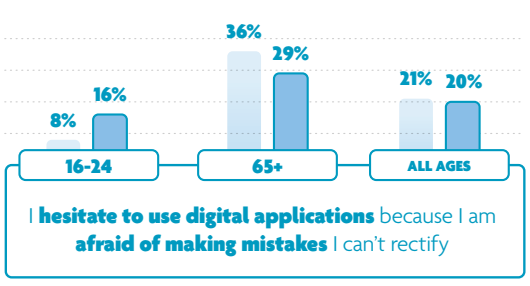
DIGITAL SKILLS

Younger people assess their skills more highly



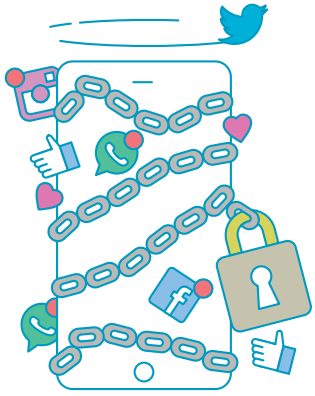


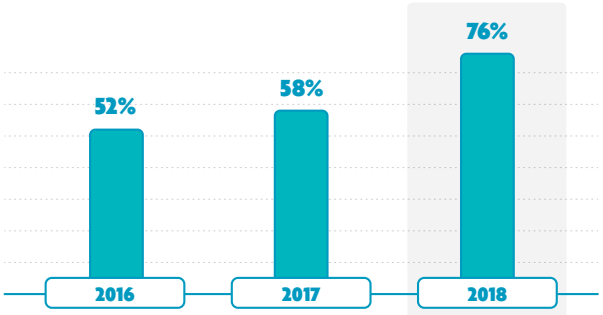




CONTROLLING SMARTPHONE USAGE

Clear rise in measures to keep smartphone usage under control





	2016	2017	2018
I deliberately put my smartphone out of sight during a conversation, meeting or class so that I am not distracted by it	28%	36%	47%
I switch off notifications/messages on my smartphone	22%	26%	32%
While driving I consciously put my smartphone away so that I am not distracted	17%	22%	30%
I stop using my smartphone just before going to bed	12%	16%	26%
I keep smartphones out of the bedroom	12%	20%	25%
I sometimes set my smartphone to 'flight mode'	—	—	25%

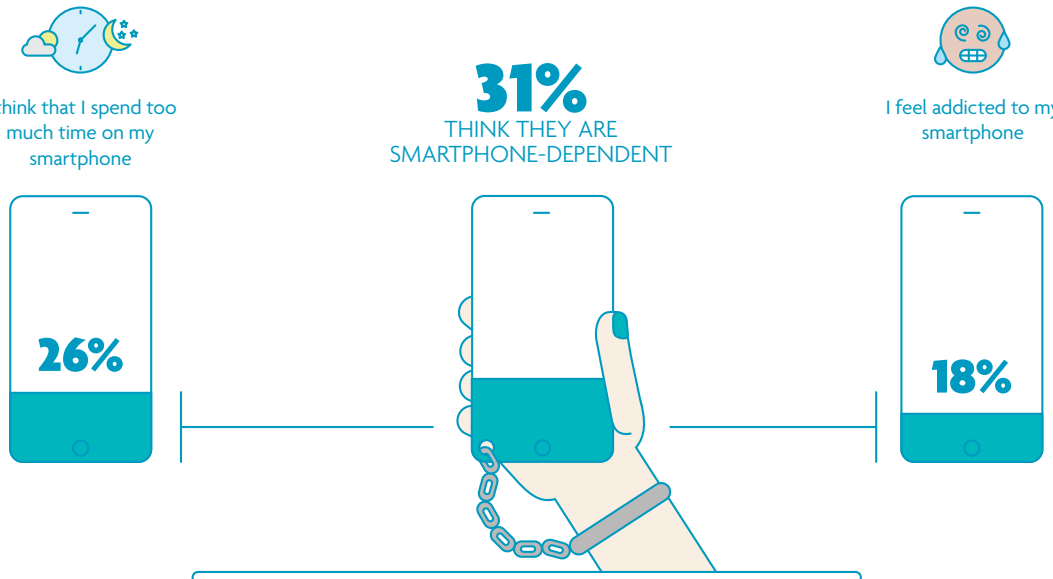
SMARTPHONE DEPENDENCY

A gap between the youngest and oldest generations

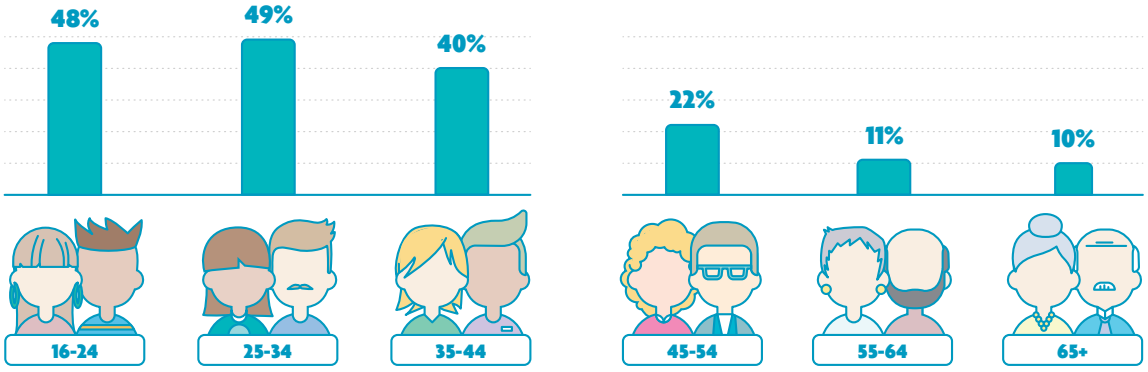
I think that I spend too much time on my smartphone

31%
THINK THEY ARE SMARTPHONE-DEPENDENT

I feel addicted to my smartphone

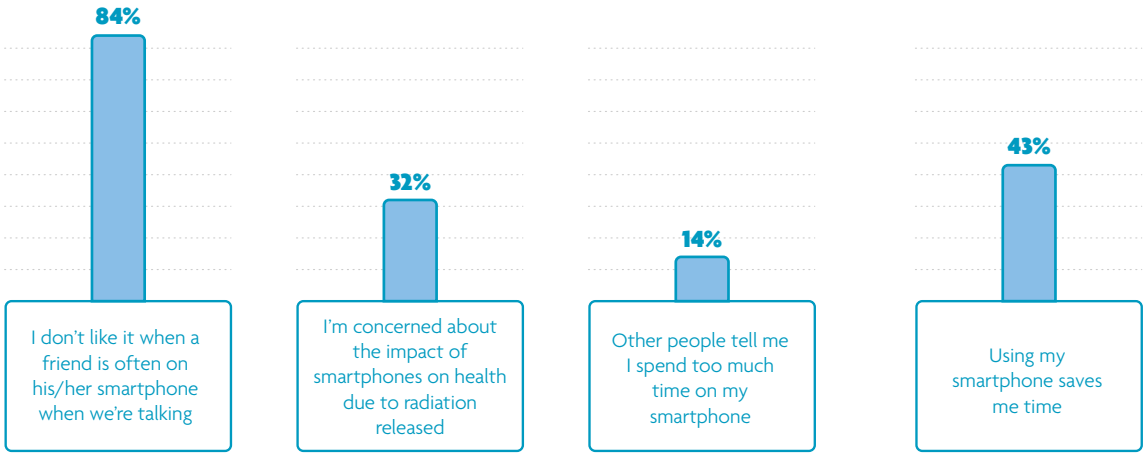


A gap between the youngest and oldest generations



ATTITUDE TO THE SMARTPHONE

Flemings think they spend too much time on their smartphone



ATTITUDES TO TECHNOLOGY

Over the past year, more and more experts and tech companies have commented on the rapid pace at which technology has insinuated itself into our lives. For example, a number of former employees from companies such as Google and Facebook set up an organization to make people more aware of the negative aspects of smartphones and social media[62]. Mark Zuckerberg, founder and CEO of Facebook, acknowledges that his company has turned a blind eye for too long to the effects of poor data management and too lax controls on what is shared on Facebook (such as hate speech or fake news)[63]. Google launched a number of tools under the heading of 'Digital Wellbeing', designed to give users more control over how they deal with technology[64]. Apple also threw its hat into the debate, adding Screen Time to the iOS 12 operating system, enabling users to monitor their own smartphone usage. In addition, CEO Tim Cook continues to go on about the difference in the business models between Apple and other tech companies such as Google and Facebook. Whereas Apple's business revolves mainly around selling hardware, Google and Facebook earn most of their money from the data generated by users (and the advertising potential that goes with it). According to Tim Cook, this means that Apple is a lot more careful with the way it deals with user data than is the case with Google or Facebook[65].

The question is whether this increased stream of negative perceptions about technology is also having a knock-on effect in people's attitudes. In Flanders, in the meantime, we can see that the largest group of people still views technological developments positively. Almost seven out of ten people feel that technology makes our lives easier and more comfortable. Two out of three are interested in digital technologies and find technology fun. This positive attitude goes hand in hand with age: the younger people are, the more enthusiastic they are about technology. Having said that, there is also a large group of technology fans among the over-65s. Almost six out of ten over-65s say that technology makes our lives easier and more comfortable, half are interested in technology and 45% enjoy using digital technology. Another interesting point is that mistrust in technology is not age-related. One in ten people in Flanders say they don't trust technology. This is a figure that varies between the age groups. In general, older age groups are more skeptical about the impact of technology (see the section on Privacy and the one on Artificial Intelligence), yet that does not make them more mistrustful of technology in general.

In terms of perceptions of own skills, we can see the effect of age, as expected: the older people are, the lower they estimate their own digital skills to be. Yet it is interesting to note that in the youngest age groups there is also a rise in uncertainty about digital technology: 19% find terms linked to digital technology confusing (compared with 11% in 2017), while 16% sometimes have doubts about using digital technology out of fear of causing irreparable damage (8% in 2017). This is the generation that is in contact the most with fast-changing technology. On the one hand they have the advantage of having grown up with technology (they are referred to by terms such as 'digital natives'), but the flipside of the coin is that an expanding group below them is wrestling with the digital express train. We need to make sure that no new digital divides are created as a result.

Interestingly, there is a similar effect among businesses. This summer, various studies were published in which companies indicated that the speed with which new technologies – and the challenges and opportunities that go with them – constituted their biggest challenge for the future of the company[66]. How companies are coping with this issue falls outside the scope of this report, but it does define who is keeping up and who is lagging behind.

62 T https://www.nytimes.com/2018/02/04/technology/early-facebook-google-employees-fight-tech.html
63 https://www.vox.com/2018/4/2/17185052/mark-zuckerberg-facebook-interview-fake-news-bots-cambridge
64 https://wellbeing.google/
65 https://www.theguardian.com/technology/2018/mar/28/facebook-apple-tim-cook-zuckerberg-business-model
66 "Coming of Age Digitally", MIT Sloan Management Review, In collaboration with Deloitte Insights, 2018

The smartphone is still a very important tool in the lives of many people in Flanders. The section on Devices & Connections shows us that increasing numbers of people view the smartphone as the device that they find most essential. In previous years we have seen a love-hate relationship cropping up with the smartphone. People think it is practical to have a compact, all-in-one device in their pocket or bag (for instance, 43% say that their smartphone helps them save time – a feeling most prevalent among 25-44 year olds), yet there is also a sort of unease in realizing how we are becoming increasingly dependent on the smartphone and that it is having an impact on our perception of social relations. For instance, 84% of Flemings say that it irritates them when the people they are talking to become distracted by their smartphone.

A quarter of Flemings say that they find themselves spending too much time on their smartphone. Only 14% say that others have already commented to them along those lines. Almost one in five also say that they feel addicted to their smartphone. While we assume that we spend too much time on our smartphone and feel addicted to it, we should also say that 31% of Flemings feel dependent on their smartphone. This feeling is highest among 16-34 year olds, where almost half say they feel dependent on it.

This does not mean that they feel less convinced about the power of the smartphone, but that they are thinking about how they can regain a feeling of control in specific situations. The most-used tactic for achieving this is to put their phone away during meetings or when they are having conversations, to switch off notifications or deliberately keep their smartphone out of reach while driving. 5% of Flemings say that they maintain their screen usage, for example via Screen Time (Apple) or MobileDNA, an app created by imec and University of Ghent that enables Android users to uncover automatic patterns in smartphone usage in addition to the basic monitoring function[67].

So, in general, the Flemish remain positive about technology, although they are also not blind to the challenges that go with it. Plus they are actively looking for ways to gain a better grip on the role that technology plays in our lives.

67 https://play.google.com/store/apps/details?id=be.ugent.mobiledna&hl=nl

ATTITUDE TO TECHNOLOGY

	Totally disagree	Disagree	Neutral	Agree	Totally agree	*(Totally) agree*
I am interested in digital technologies	4%	6%	25%	38%	28%	*65%*
I find it easy to deal with digital technologies	5%	12%	28%	34%	19%	*54%*
In general I don't trust technology	16%	39%	35%	7%	2%	*10%*
Using digital technologies is fun	3%	4%	30%	46%	18%	*64%*
Digital technologies make our lives easier and more comfortable	2%	3%	27%	50%	18%	*68%*

To what extent do you agree with the statements below in relation to digital technologies? [scale of 1 to 5] (total sample, N=4,547)

ATTITUDE TO TECHNOLOGY - PROPORTION (TOTALLY) AGREE - SPLIT BY AGE GROUP

	16-24	25-34	35-44	45-54	55-64	65+	*Total*
I am interested in digital technologies	68%	78%	73%	68%	59%	51%	***65%***
I find it easy to deal with digital technologies	74%	79%	69%	50%	38%	29%	***54%***
In general I don't trust technology	11%	12%	11%	10%	8%	8%	***10%***
Using digital technologies is fun	76%	81%	73%	66%	54%	45%	***64%***
Digital technologies make our lives easier and more comfortable	73%	78%	72%	68%	63%	58%	***68%***

To what extent do you agree with the statements below in relation to digital technologies? - % (totally) agree (4 or 5 on a scale of 1 to 5) - Split by age group (total sample N=4,547)

ATTITUDE TO DIGITAL SKILLS

	Totally disagree	Disagree	Neutral	Agree	Totally agree	*(Totally) agree*
I trust them in that I am capable of learning digital skills	2%	3%	15%	51%	29%	*80%*
I find terms linked to digital applications confusing	12%	28%	34%	21%	5%	*26%*
I have avoided digital applications because I am not familiar with them	21%	34%	24%	19%	3%	*23%*
I hesitate to use digital applications because I am afraid of making mistakes I can't put right	22%	34%	24%	16%	4%	*20%*

To what extent do you agree with the statements below in relation to digital applications & skills? [scale of 1 to 5] (total sample N=4,547)

ATTITUDE TO DIGITAL SKILLS - PROPORTION (TOTALLY) AGREE - SPLIT BY AGE GROUP

		16-24	25-34	35-44	45-54	55-64	65+	*Total*
I trust them in that I am capable of learning digital skills	2017	78%	87%	81%	75%	70%	55%	72%
	2018	**80%**	**89%**	**88%**	**83%**	**77%**	**67%**	***80%***
I find terms linked to digital applications confusing	2017	11%	14%	12%	23%	34%	41%	25%
	2018	**19%**	**14%**	**19%**	**29%**	**34%**	**35%**	***26%***
I have avoided digital applications because I am not familiar with them	2017	13%	15%	14%	27%	35%	41%	26%
	2018	**15%**	**12%**	**18%**	**21%**	**27%**	**35%**	***22%***
I hesitate to use digital applications because I am afraid of making mistakes I can't put right	2017	8%	11%	9%	22%	28%	36%	21%
	2018	**16%**	**11%**	**12%**	**19%**	**27%**	**29%**	***20%***

To what extent do you agree with the statements below in relation to digital applications & skills? - % (totally) agree (4 or 5 on a scale of 1 to 5) - Split by age group (total sample N=4,547)

MANAGING SMARTPHONE USAGE - FILTER ON SMARTPHONE OWNERSHIP (N = 3,686)

	2016	2017	**2018**
During a conversation, meeting or class, I consciously switch off my smartphone so that I won't be distracted	28%	36%	**47%**
Switch off notifications/messages on my smartphone	22%	26%	**32%**
While driving, I consciously switch off my smartphone so that I won't be distracted (e.g. by putting it in the boot)	17%	22%	**30%**
Just before going to bed I stop using my smartphone	12%	16%	**26%**
I keep smartphones out of the bedroom	12%	20%	**25%**
I sometimes put my smartphone in 'airplane mode'			**25%**
Switch my smartphone off more often	7%	10%	**9%**
I keep a record of how long I spend each day on my smartphone	2%	1%	**5%**
I use an ordinary mobile phone from time to time instead of my smartphone	3%	2%	**3%**
Total	***52%***	***58%***	***76%***

Which of the items below do you do in relation to your smartphone? (filter on who owns a smartphone, N=3,686 or 81% of the sample)
NB: this question has changed in relation to previous years. In previous years there was strong emphasis on winning back control "Do you do certain things to keep your smartphone usage under control?"), whereas this year it is worded more openly ("Which of the items below do you do in relation to your smartphone?"). This may partly explain the sharp rise.

APPS TO MONITOR SMARTPHONE USAGE

Screen Time (built-in monitor in Apple's iOS)	43%
I keep a manual check (no app)	36%
MobileDNA (monitor from University of Ghent and imec for Android)	7%
Quality Time	4%
Digital Wellbeing (built-in monitor for Android)	3%
Forest	3%
Moment (also called 'In the moment')	2%
Something different	5%

Which apps do you use to monitor how much time you spend on your smartphone? Multiple answers possible. (filter on who has indicated "Monitor how much time I spend each day on my smartphone" as action taken on the smartphone, N=304 or 5% of the sample)

ATTITUDE TO SMARTPHONES

	Totally disagree	Disagree	Neutral	Agree	Totally agree	*(Totally) agree*
I find it irritating if a friend is on his/her smartphone when we are talking	2%	3%	11%	39%	46%	*84%*
I am concerned about the impact of smartphones on health caused by the radiation they emit	10%	16%	42%	23%	9%	*32%*
Other people tell me I often spend too much time on my smartphone	30%	37%	20%	12%	3%	*14%*
I find myself that I spend too much time on my smartphone	20%	28%	27%	22%	4%	*26%*
I feel addicted to my smartphone	33%	31%	19%	15%	3%	*18%*
Using a smartphone saves me time	8%	14%	35%	35%	8%	*43%*

To what extent do you agree with the statements below? [scale of 1 to 5] (total sample N=4,547)

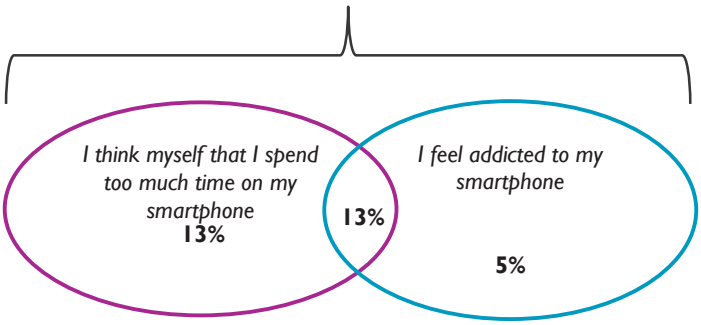
ATTITUDE TO SMARTPHONES - PROPORTION (TOTALLY) AGREE - SPLIT BY AGE GROUP

	16-24	25-34	35-44	45-54	55-64	65+	*Total*
I find it irritating if a friend is on his/her smartphone when we are talking	79%	80%	84%	86%	89%	87%	***84%***
I am concerned about the impact of smartphones on health caused by the radiation they emit	31%	27%	34%	30%	35%	34%	***32%***
Other people tell me I often spend too much time on my smartphone	24%	18%	17%	11%	7%	9%	***14%***
I find myself that I spend too much time on my smartphone	41%	42%	36%	18%	9%	7%	***26%***
I feel addicted to my smartphone	29%	31%	21%	13%	6%	6%	***18%***
Using a smartphone saves me time	40%	54%	50%	45%	37%	28%	***43%***

To what extent do you agree with the statements below? - % (totally) agree (4 or 5 on a scale of 1 to 5) - Split by age group (total sample N=4,547)

DEPENDENCE ON SMARTPHONE

Dependence on smartphone: feel they spend too much time on their smartphone or are addicted to it: **31%**



% (totally) agree (4 or 5 on a scale of 1 to 5) with at least one of the statements below (total sample N=4,547):
- "I think myself that I spend too much time on my smartphone"
- "I feel addicted to my smartphone"

DEPENDENCE ON SMARTPHONE - SPLIT BY AGE GROUP

	Dependence on smartphone
16-24	48%
25-34	49%
35-44	40%
45-54	22%
55-64	11%
65+	10%
Total	***31%***

% (totally) agree (4 or 5 on a scale of 1 to 5) with at least one of the statements below (total sample N=4,547) - Split by age group.
- "I think myself that I spend too much time on my smartphone"
- "I feel addicted to my smartphone"

What is the adoption rate of smartphones and tablets in Flanders, and what do they use them for? How popular are Netflix and Spotify in Flanders? And how do they evaluate the ever increasing digitization of society?

Imec.digimeter monitors the trends in possession and use of media and technology in Flanders since 2009, and sheds a light on the attitudes and expectations towards new technology. The findings and results are based on a survey amongst 4.547 Flemings aged 16 and older.

www.imec.be/digimeter

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