



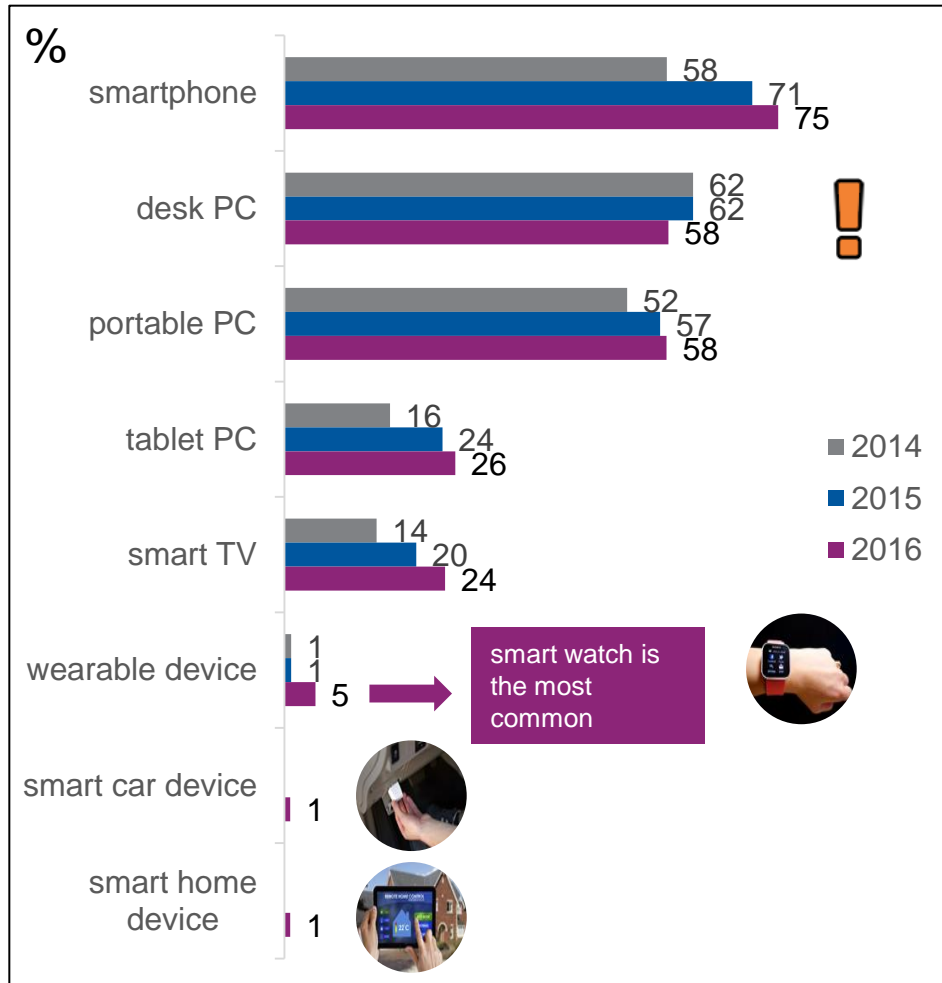
NMHH

**National Media and Infocommunications
Authority • Hungary**

**INTERNET USAGE BY
INDIVIDUALS
ONLINE SURVEY
2016**

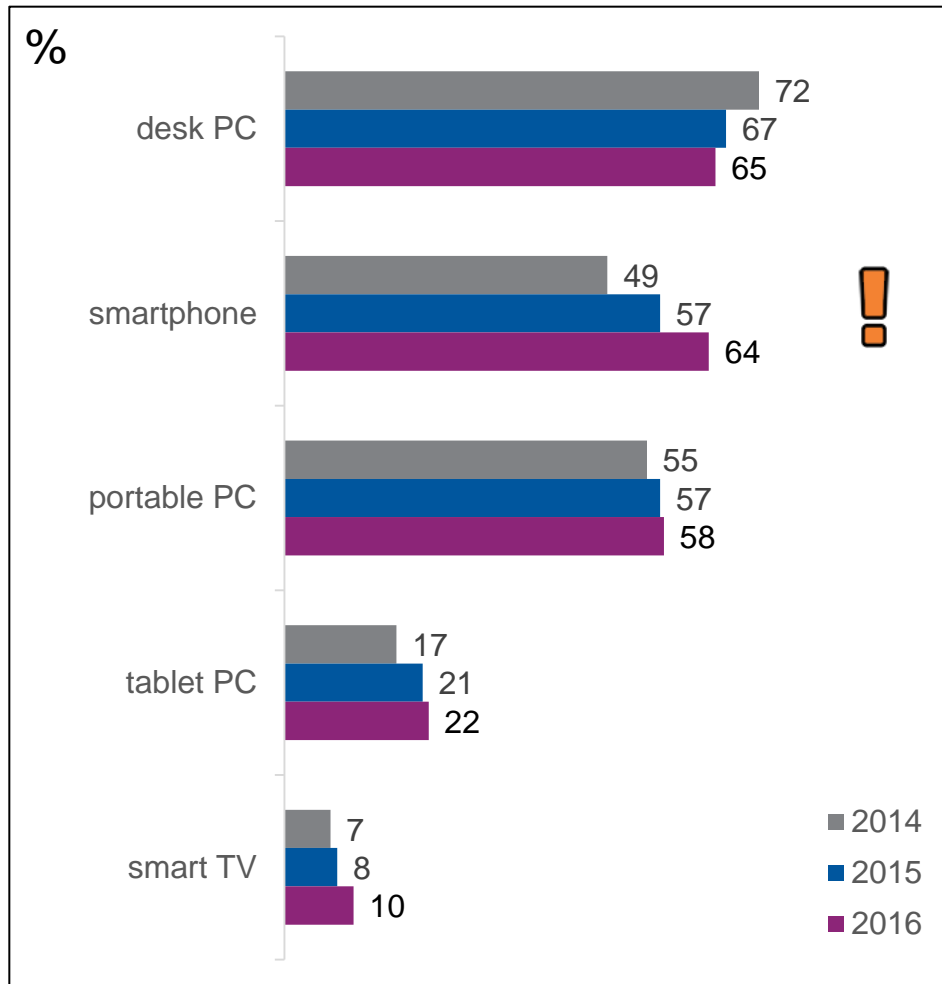
Research summary for the National Media and Infocommunications
Authority (Hungarian abbreviation: NMHH)
Ariosz Ltd., NRC Ltd.

Client	National Media and Infocommunications Authority (NMHH)
Service Provider	NRC Market Research Ltd. Ariosz Service, Informatics, and Consulting Ltd.
Fieldwork Period	16.11.2016 – 16.12.2016
Survey Method	online interviews with standardised questionnaire (CAWI)
Population	individuals aged 16+ with residence in Hungary who use the Internet at least once a week
Sample Size	3105 respondents
Weighting	multidimensional factor weighting by age, gender, level of education, and type of settlement
Statistical Error of Sampling	In case of the whole sample(s): ±2.5% at most between the whole samples of 2015 and 2016; and ±2% at most in case of proportions of one data collection



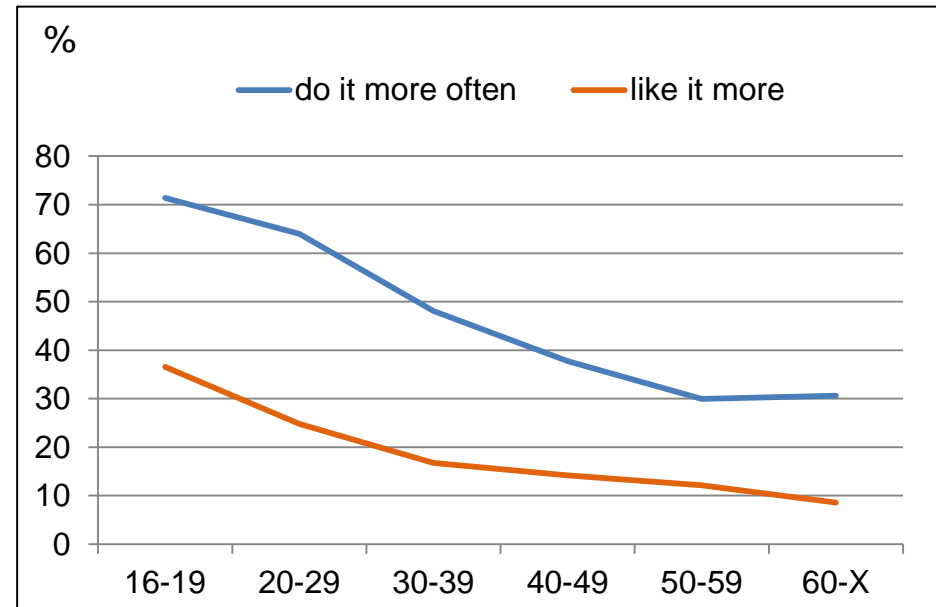
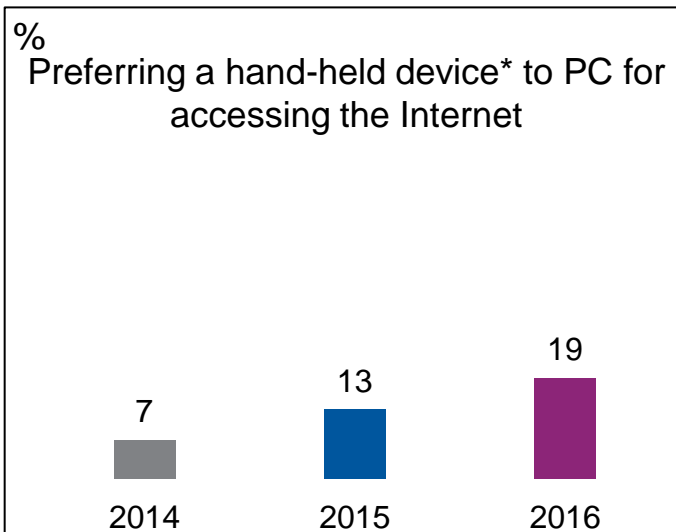
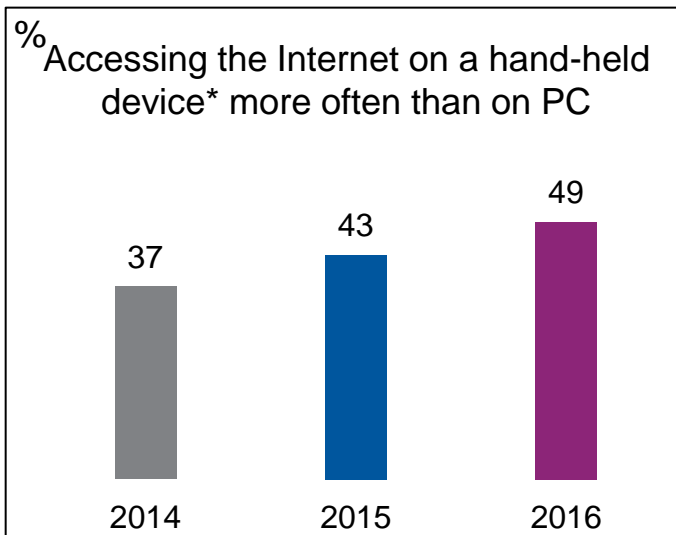
- In 2016, the ownership of 8 devices suitable for the Internet was examined in our survey. By ownership we mean that respondents or their family have it in their household and respondents use it as well.
- The tendency of substitution in device usage has slowed down compared to the year before. Penetration of tablet PC, smartphone, and smart TV has increased. Decline in penetration of desk PCs has started in Hungary as well. In case of portable PCs, stagnation but not a decrease can be noticed.
- Besides wearable devices, various other smart devices showed up among Hungarian Internet users, mostly smart car and smart home devices. In 2016, several providers has already had IoT offers in Hungary.

Basis: Internet users, n=3105, N=5.8 m



- In 2016, the proportion of users accessing the Internet by smartphone has reached of those accessing the Internet by desk PC.
- Proportion of users accessing the Internet on smartphone may be higher than indicated on the figure. Because our survey data also show that new adopters of smartphone are not always aware whether using apps mean Internet usage or not.
- Those who has become smartphone users in the last 3 years are 5 years older on average and less sophisticated Internet users than those having a longer experience with smartphones. This is a reason why new users have difficulties with distinguishing between online and offline usage of smartphones.

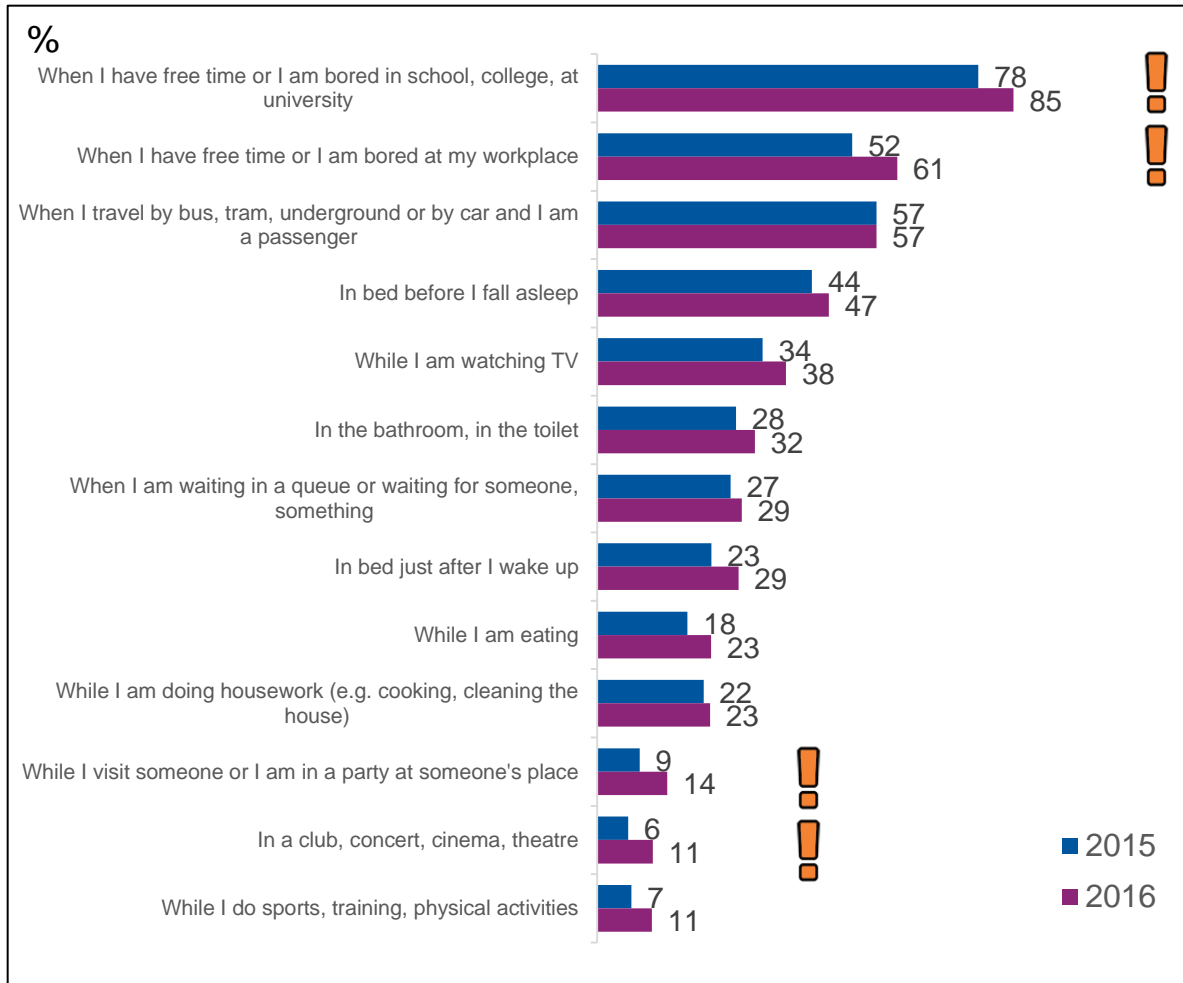
Basis: Internet users, n=3105, N=5.8 m



- In 2016, proportion of users preferring hand-held devices to PC when accessing the Internet has further grown. The majority of people under 30 use hand-held devices more than PCs.
- Although, less users are happy with accessing the Internet by a hand-held device than they actually use it. The majority of Internet users like traditional PCs more and do only certain online activities on hand-held devices.

Basis: users accessing the Internet by both PC at home and smartphone/tablet, n=2095, N=3.9 m

*In 2014 and 2015-ben: smartphone, in 2016: smartphone or tablet

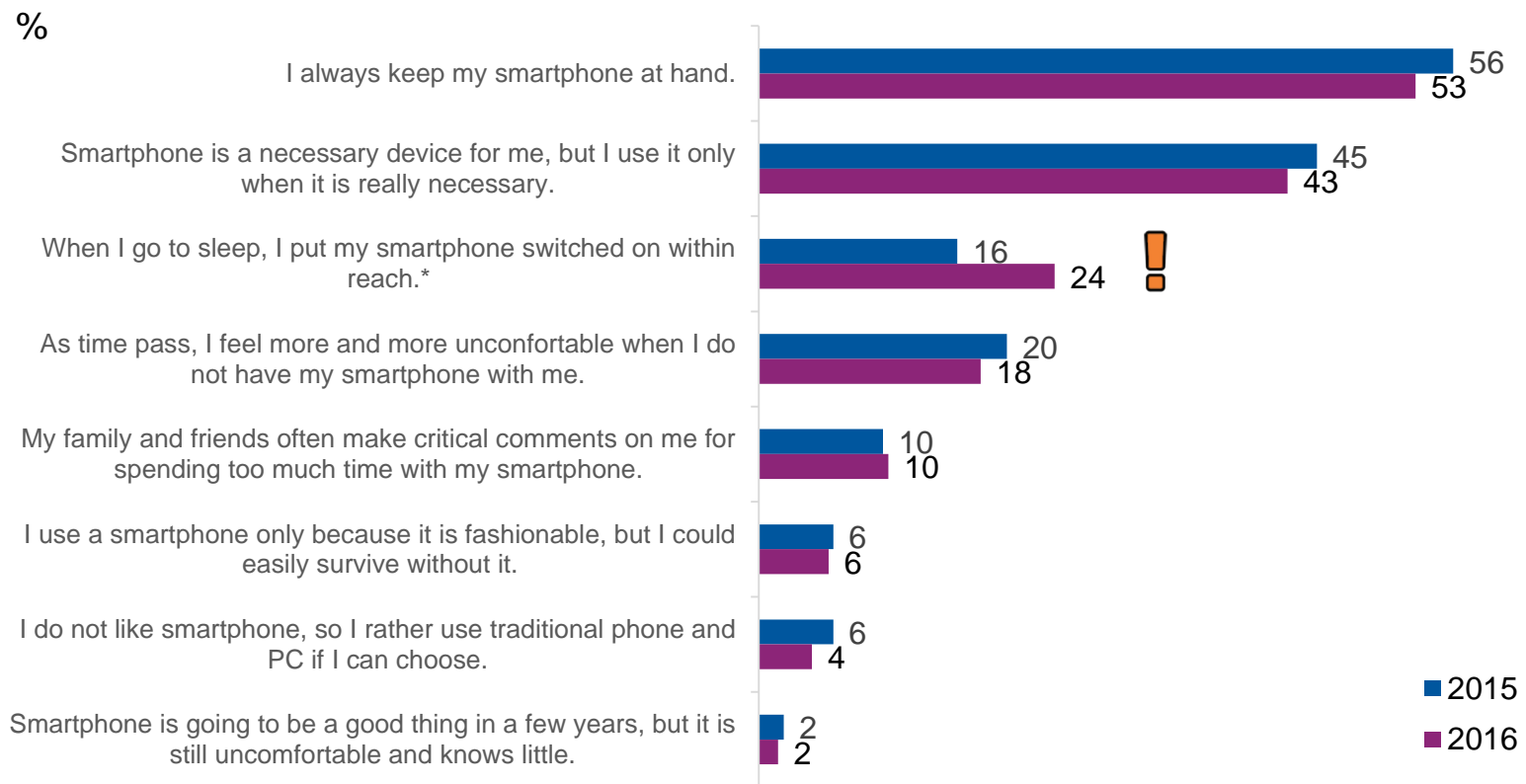


- Smartphone usage has significantly grown in schools and at workplaces compared to the year before.
- Smartphone usage has increased in situations perceived before as impolite or disturbing that indicates well how smartphone becomes a common tool in the society.

Basis: smartphone users, n=2327, N=4.3 m

Answers referring to workplace/school: smartphone users economically active/still in school

There are more people experiencing one or more signs of getting habituated to their smartphone (65%) than those who mention signs of aversion about this device (50%). People having had a smartphone for a longer period feel more and more familiarity towards this device.

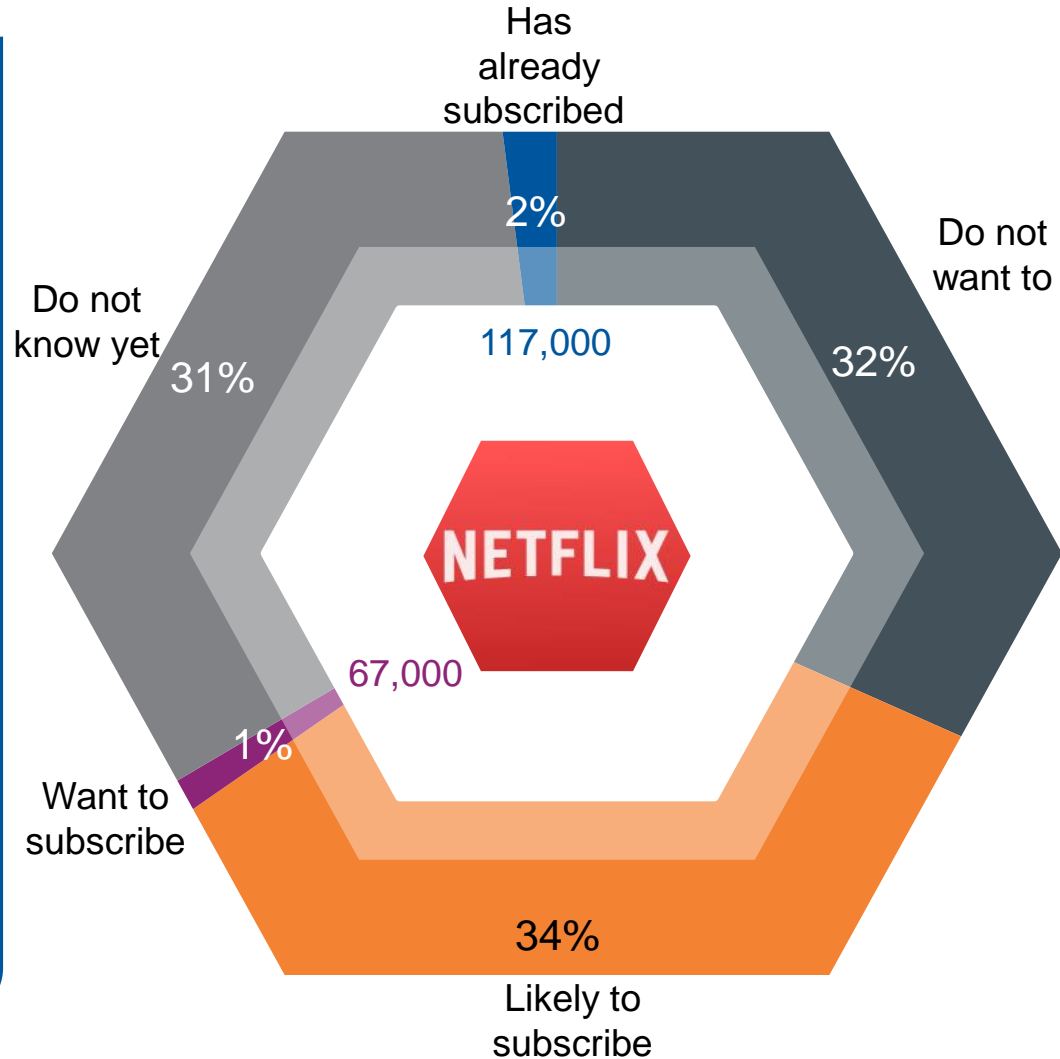


Basis: smartphone users, n=2327, N=4.3 m

*This item was explained by the following note in the questionnaire:

"Not because I use it as an alarm clock but to check whether I receive messages or if I cannot sleep."

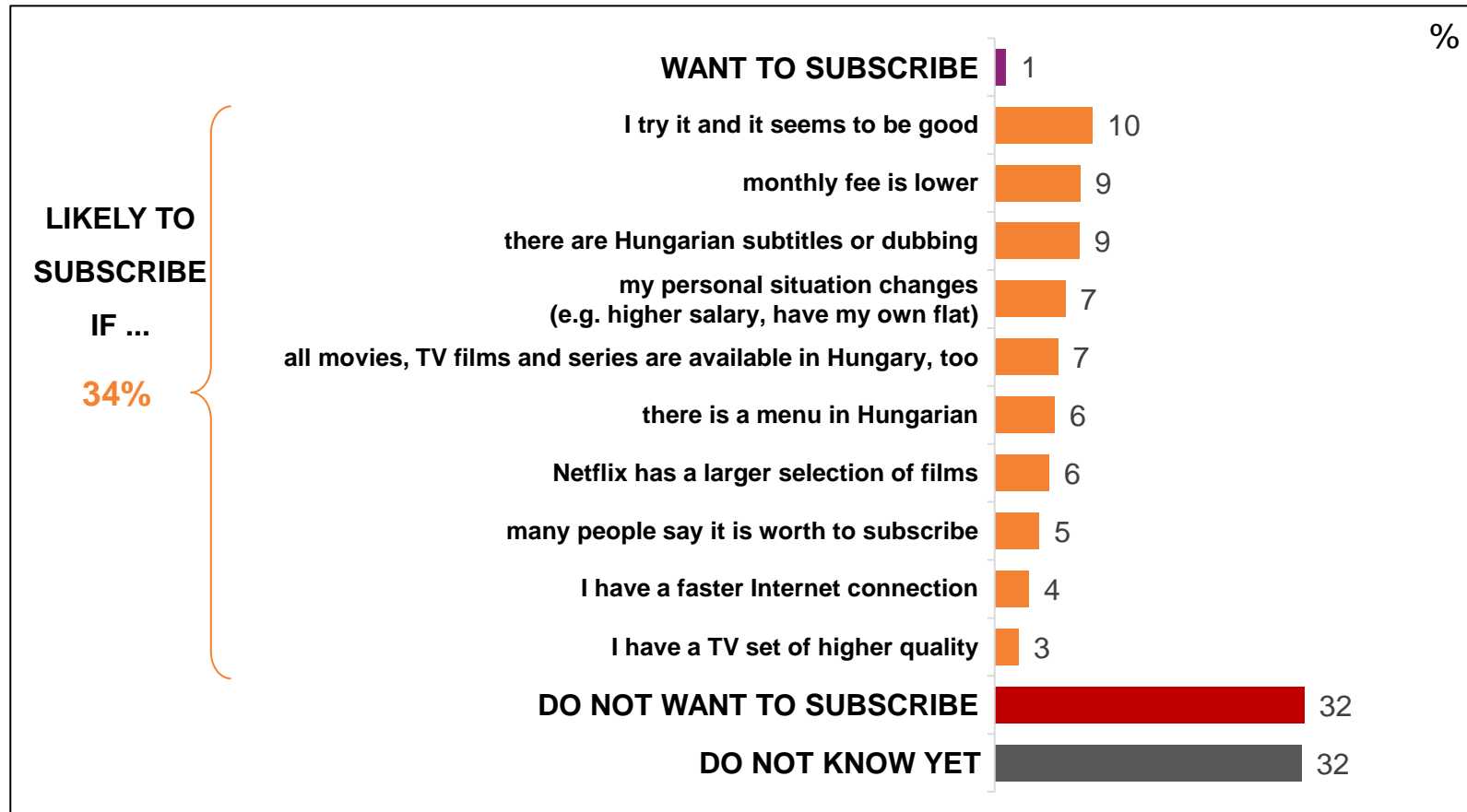
- After 3 years presence in the online video market, in January 2016, Netflix made its service available in all countries on Earth (except 3 countries*). Interested users could benefit from a free trial option of one month. 13% took this opportunity in Hungary.
- Although, Netflix could raise the number of subscribers to 93 million in the world by this action in one year, only a few Hungarians adopted this service. The main reason behind it may be that Netflix offers hardly any content in Hungarian or with Hungarian subtitles. The majority of present and potential future subscribers watch movies in original language and without Hungarian subtitles which means that this service is mostly attractive only for those speaking English on advanced level.
- Better command of the English language and a stronger inclination to follow new trends may be the explanation why younger and well-educated people show more interest than others to subscription for Netflix.



Basis: Internet users, n=3105, N=5.8 m
 *The 3 exceptions are Syria, North-Korea, and China

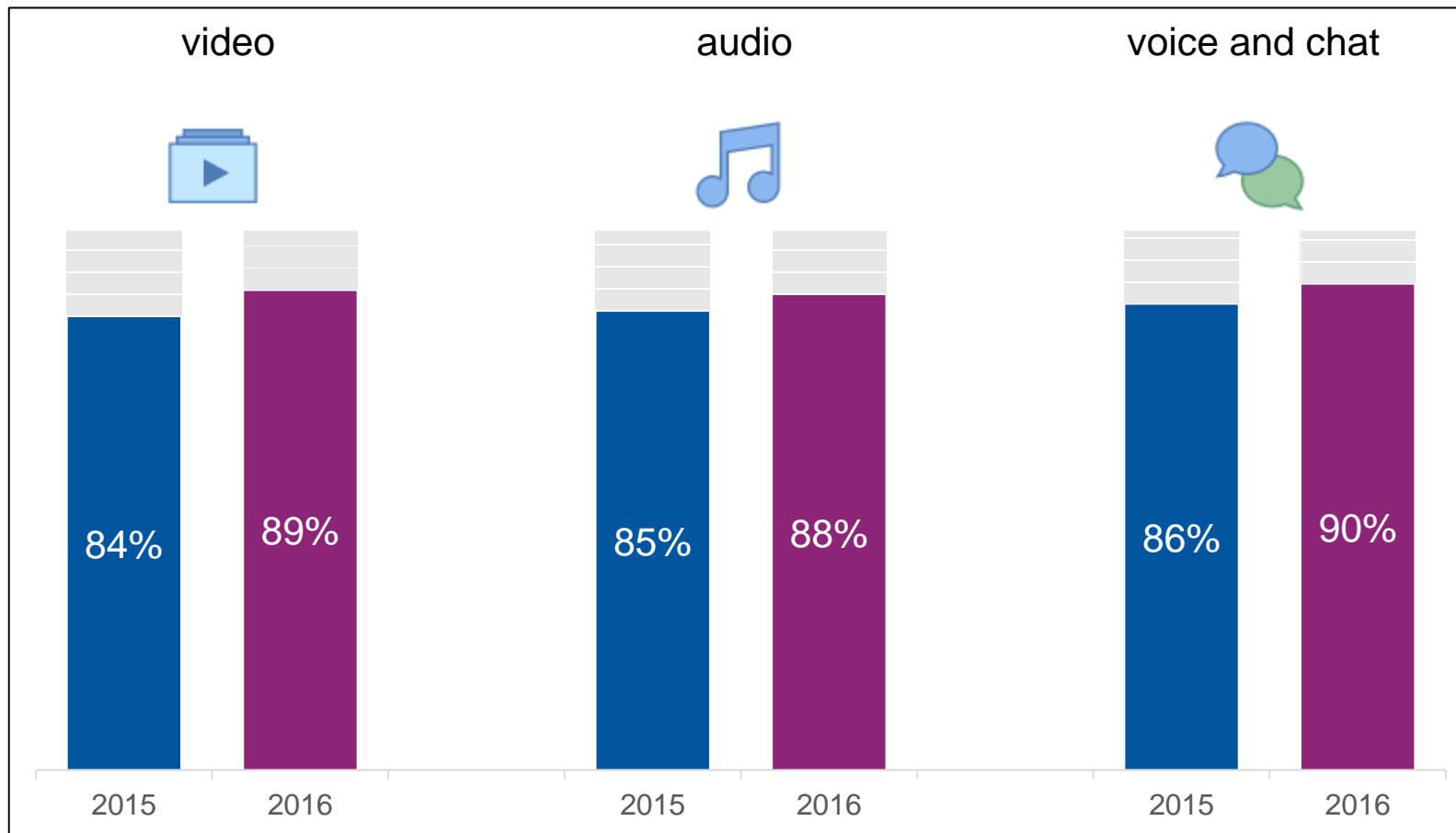
Besides monthly fees, lack of personal experience, language barriers, and limited supply are the main hurdles of subscribing for Netflix.

Is it likely that you will subscribe for Netflix in the future?



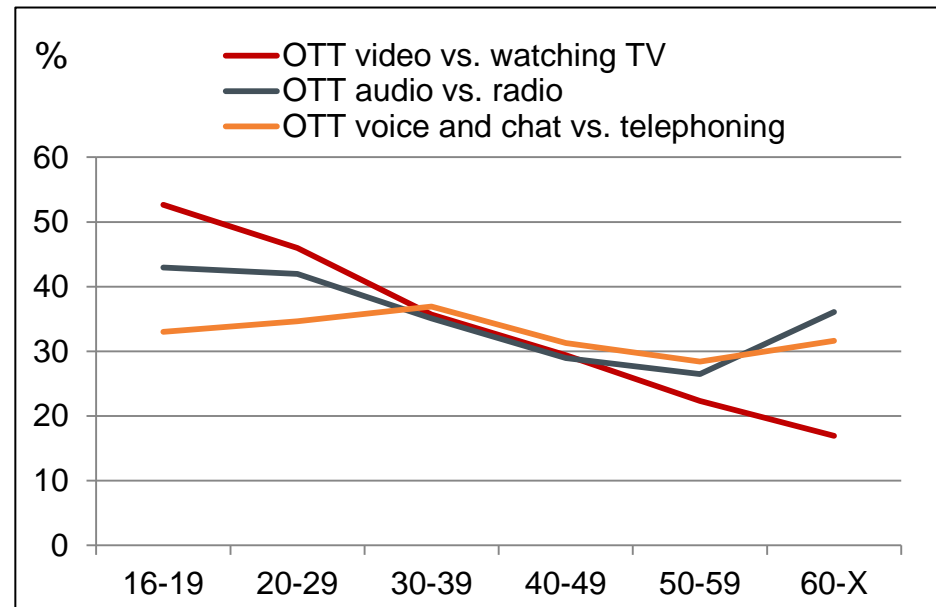
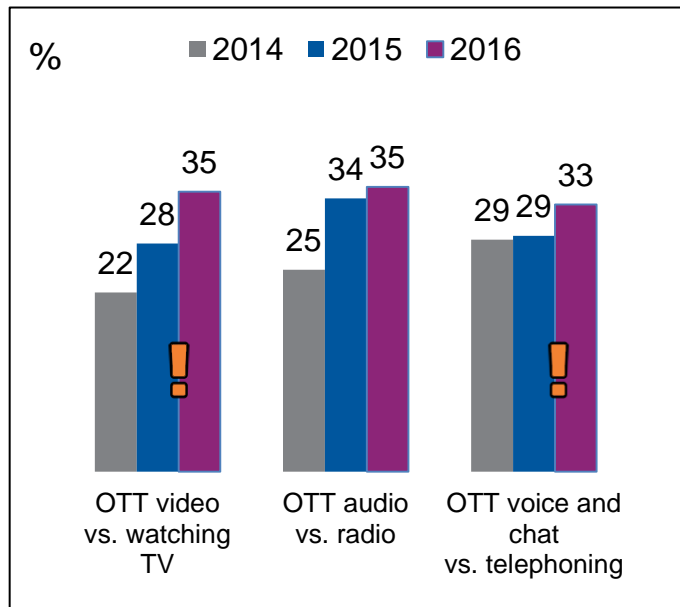
Basis: Internet users who do not subscribe for Netflix, n=3042, N=5.66 m

In 2016, 97% of Hungarian Internet users aged 16+ used OTT contents. Increase in usage can be noticed in case of all three types of OTT contents compared to the year before.



Basis: Internet users, n=3105, N=5.8 m

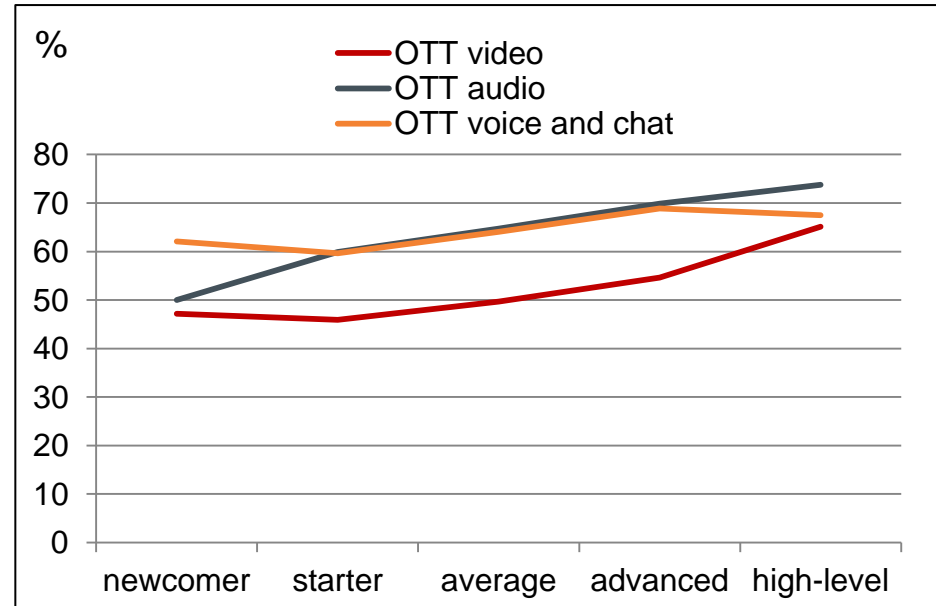
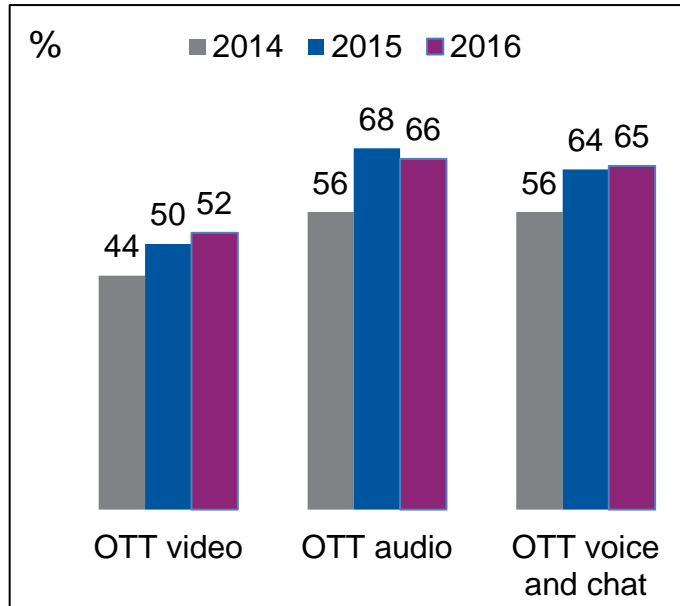
The proportion of people using traditional services less or not any more as a result of accessing OTT contents



- In 2016, OTT video and OTT chat usage has reached the level of OTT audio consumption in substituting traditional communication services.
- Younger people seem to be more inclined than other users to change their previous consumption habits. This difference is especially apparent in case of watching TV. Besides, it is also important to add that many of the youth have not even started to use traditional services. However, retirement makes a difference: OTT audio content and OTT voice and chat are more popular among elderly Internet users than economically active users who may have less spare time.

Basis: users of video, audio, and voice and chat OTT contents who gave a valid answer, n=2566/2481/2796, N=4.8/4.6/5.2 m

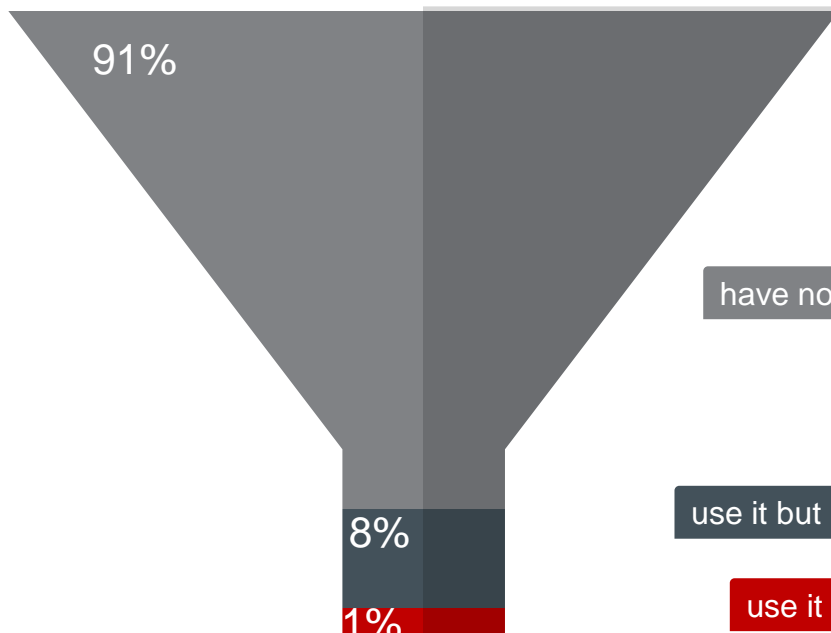
Proportion of users satisfied rather or very much with OTT contents
(top 2 boxes on a 5-point scale)



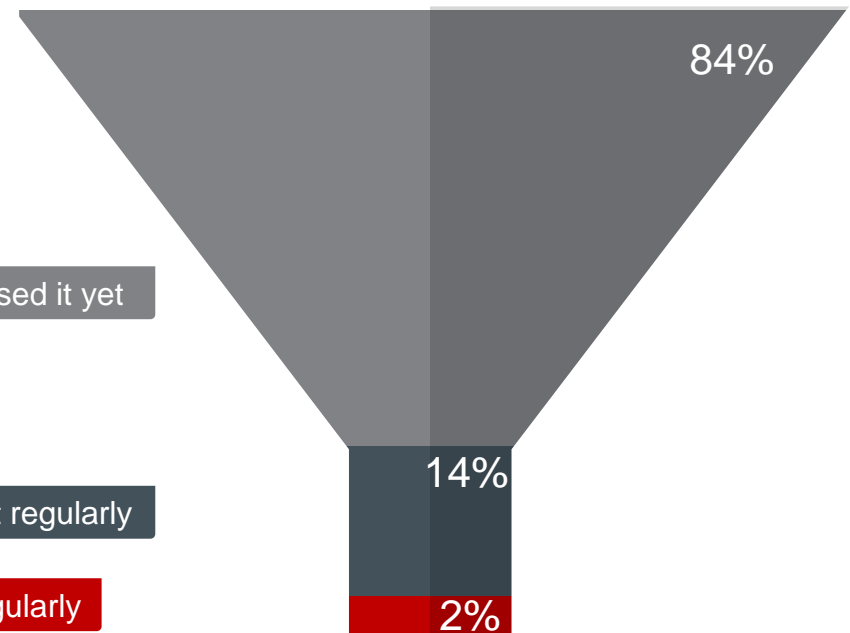
- The level of satisfaction with OTT video contents has been still a bit lower than with other types of OTT contents. An explanation may be the lower quality of image resolution.
- There is no significant difference in satisfaction with OTT contents by age groups.
- Significant differences can be seen in consumer satisfaction by skills of Internet usage. There may be two main reasons for this. One is that more advanced users are more likely to find the appropriate and improved OTT contents. And the other one is that some time may be necessary for beginners to get used to the new ways of communication and media consumption.

Basis: users of video, audio, and voice and chat OTT contents, n=2764/2741/2801, N=5.1/5.1/5.2 m

Virtual reality (VR)



Augmented reality (AR)



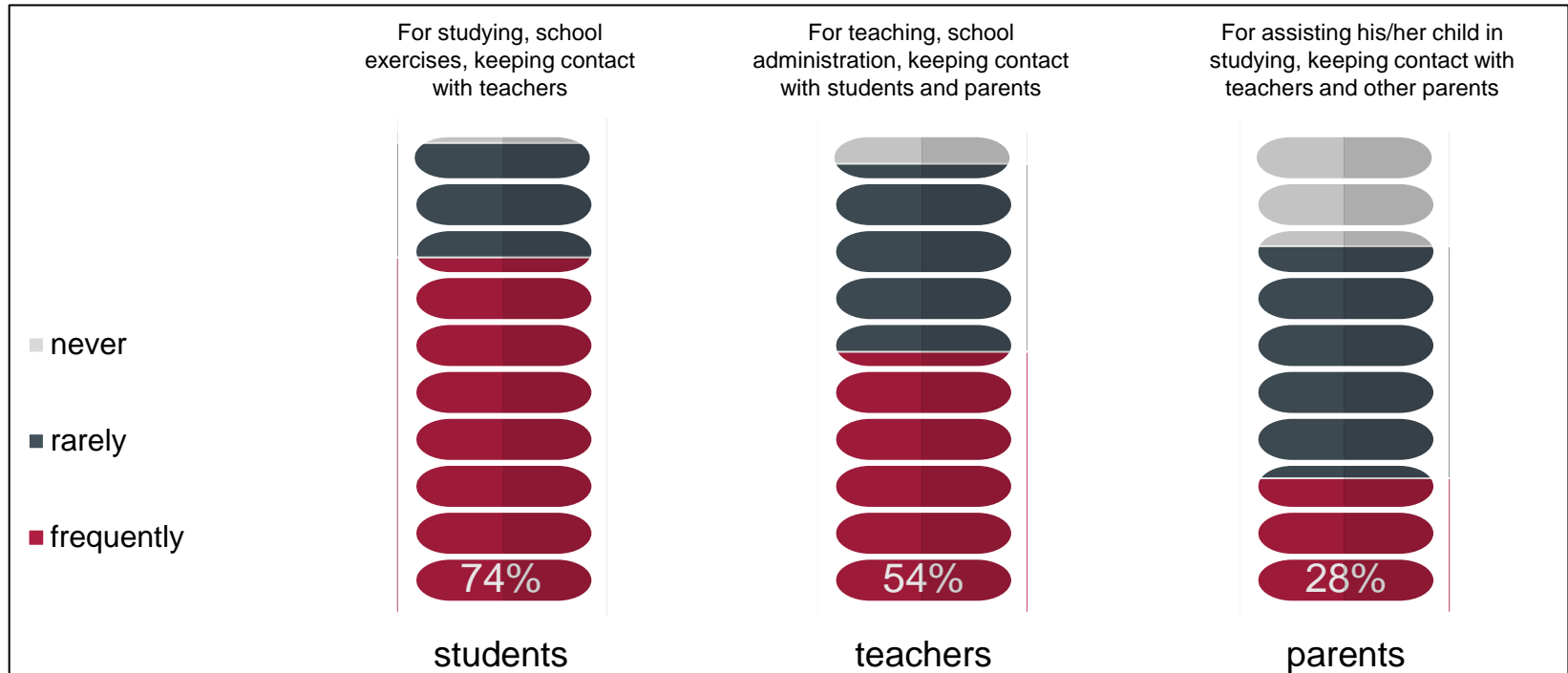
Men, the youth, people living in Budapest, and more professional Internet users are more likely to have already tried and to use both VR and AR technologies.

The great popularity of Pokemon Go arriving to Hungary in July 2016 can be illustrated well by the fact of being third on the list of top Hungarian searches on Google in 2016* following the UEFA European Championship and the Rio Olympics.

Basis: Internet users, n=3105, N=5.8 m

* <https://www.google.com/trends/>

INTERNET USAGE

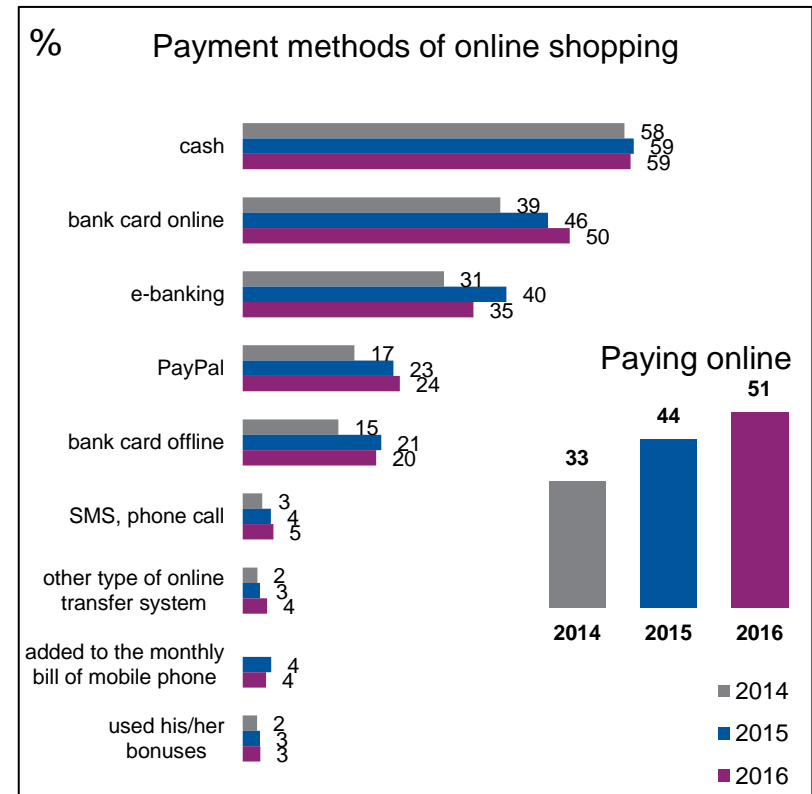
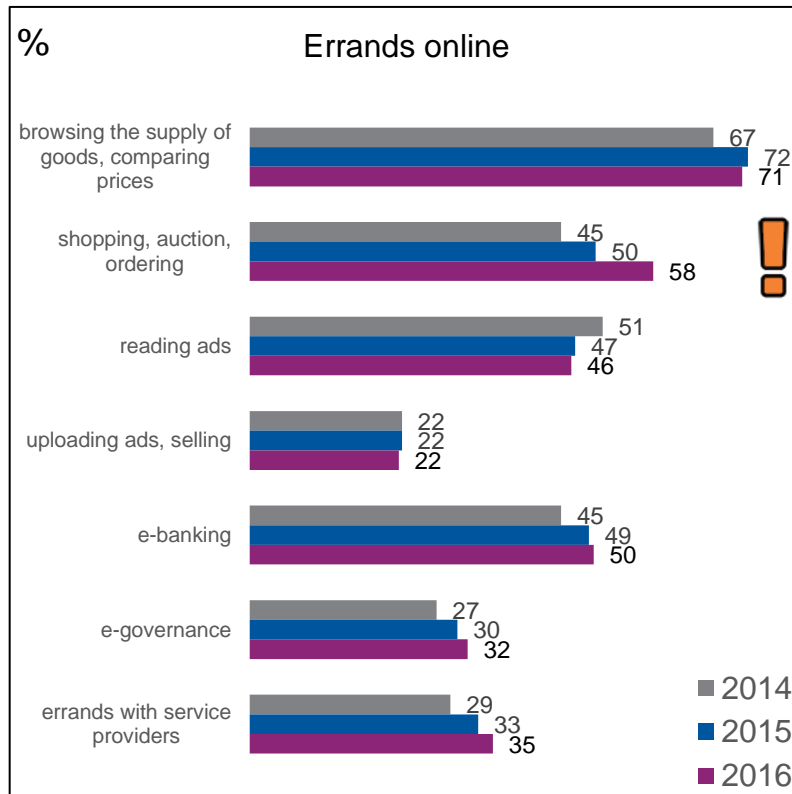


- In the population of Internet users aged 16+, three-quarter of students, about half of teachers, and one quarter of parents use the Internet in relation to education.*
- Students and teachers on higher levels of the education system are more likely to use the Internet for studying/teaching purposes than on lower levels. The contrary can be noticed in case of parents: the majority of parents may not be able to assist their children in studying matters on higher levels of the education system.

Basis: students/teachers/parents, n=377/107/863, N=0.7/0.2/1.6 m

*These data are not representative to the population of students/teachers/parents as our survey is conducted among Internet users only

- Proportion of online shopping has increased significantly compared to the year before: 2016 is the first year when the majority of Internet users bought something online in the previous 6 months.
- Those who buy online still mostly pay with cash, but online payment methods have become a bit more popular (with bank card, via PayPal or other online transfer systems).

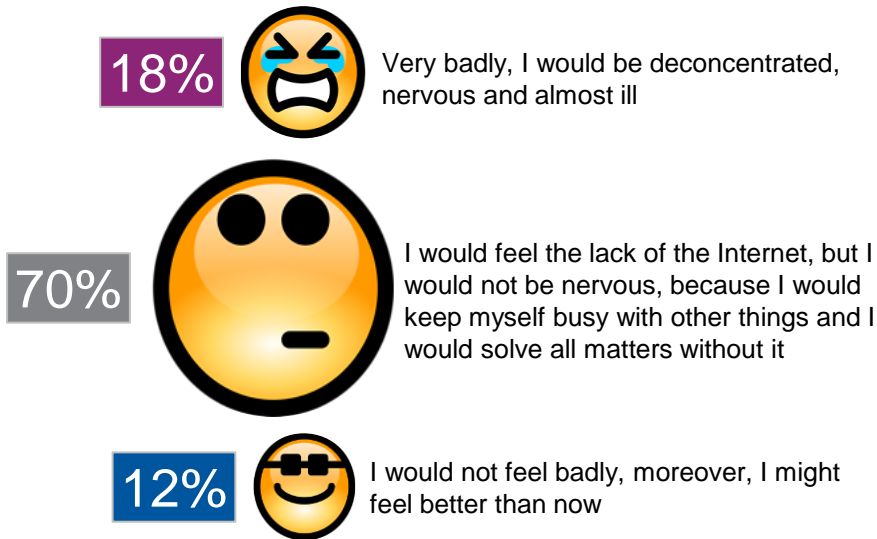


Basis: Internet users and those who bought something online in the last 6 months, respectively, n=3105, N=5.8 m and n=1810, N=3.4 m

- There is no significant difference in feelings about getting habituated to the Internet by age groups.
- Instead, the following factors relating to each other as well have stronger impact:

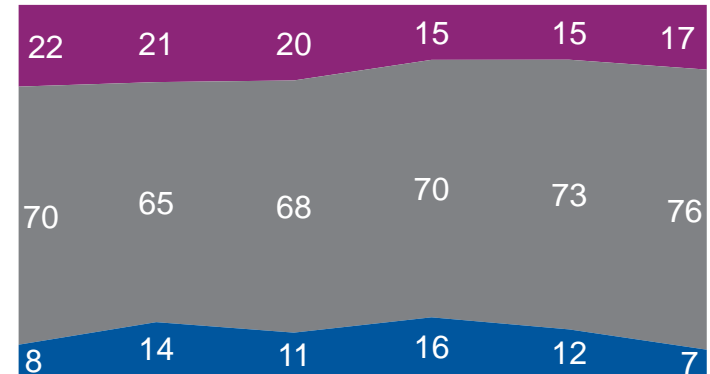
number of places of Internet use	type of devices for Internet use	access the Internet on hand-held device
Internet use, hour/day	starting the Internet before or after 2000	starting the Internet as a child or adult
prefer the Internet to traditional media services		skills of Internet usage

Q: How would you feel if for any reason, you could not use the Internet at all in the next 3 months?

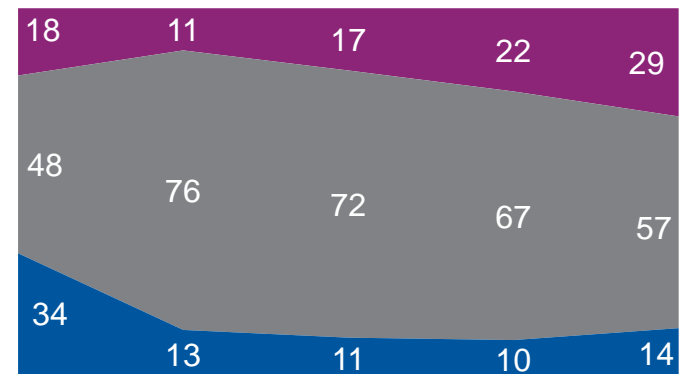


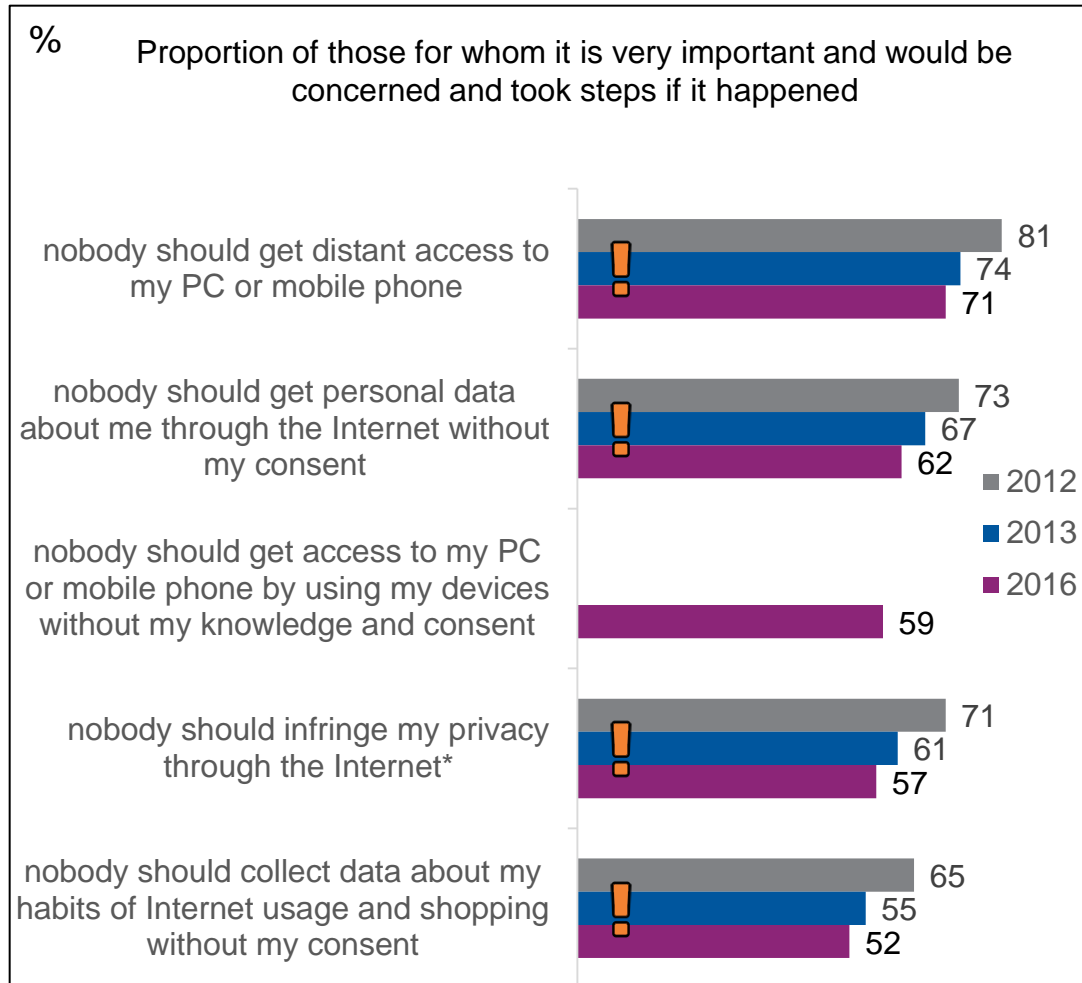
Basis: Internet users, n=3105, N=5.8 m

16-19 20-29 30-39 40-49 50-59 60-X



newcomer starter average advanced high-level





- Hungarian Internet users seem to be less sensitive to their personal data and privacy compared to 5 years before. This is not a Hungarian but an international tendency that people are more and more likely to accept that information published on the Internet is not private any more.
- Nevertheless, more than half of Internet users aged 16+ would be angry if an organisation or a person had access to his/her private information through the Internet or his/her own device. Although, as it is presented on the following slides, they have rather ambiguous knowledge on the extent and depth of online data collection.

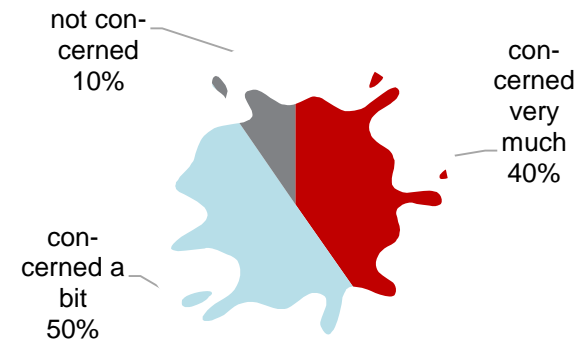
Basis: Internet users, n=3105, N=5.8 m

*Examples mentioned in the questionnaire to help the respondent understand better this item: "e.g. publishing someone's photo, his/her real name or email address without his/her consent"



As the process of tech companies collecting, storing, and analyzing data on Internet users and its purposes are not transparent, even data protection experts do not have knowledge on these activities and can only draw conclusions by experiences. Although, it may be taken for granted that all big companies follow extensive user tacking routines. The Washington Post published a 98-item list on personal data collection of Facebook based only on the analysis of targeted advertisements with some sensitive items like size of the apartment, income, and party preference.* An Austrian data protection activist submitted a request to Facebook about all his data stored by the company. He received a document of 1222 pages, although, he had used the site for 3 months and only occasionally. This document did not contain his/her private messages only but his deleted private messages as well.** A Belgian court has recently declared that Facebook collect data even on Internet users who are not registered on the site.***

Q: Are you concerned if a provider or website collect data about you and your Internet usage (perhaps without your knowledge or consent)?



Basis: Internet users, n=3105, N=5.8 m

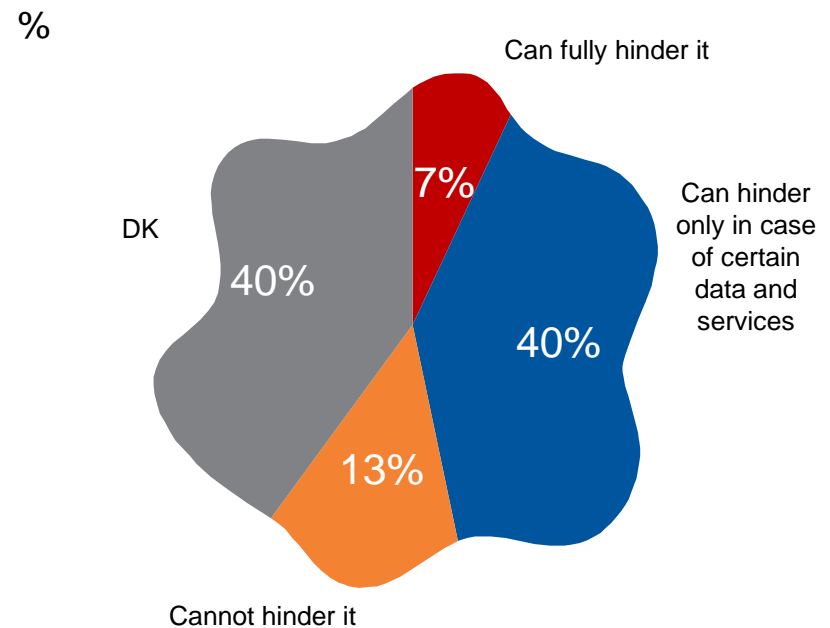
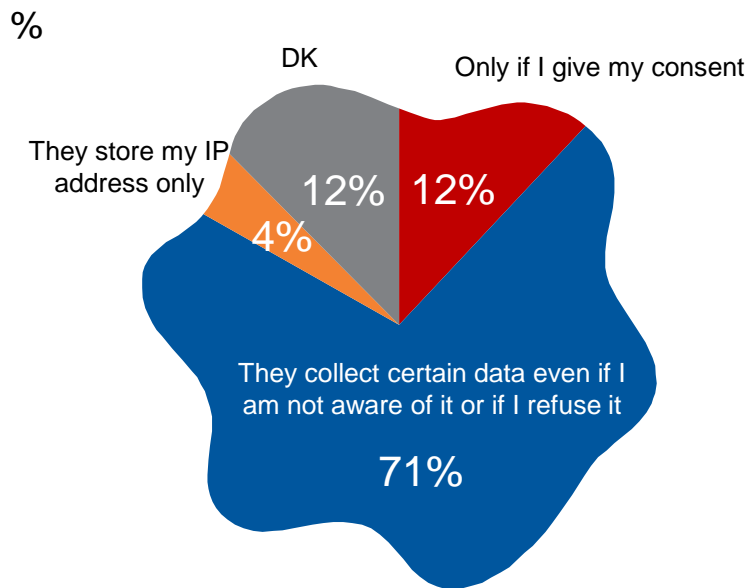
*www.washingtonpost.com/news/the-intersect/wp/2016/08/19/98-personal-data-points-that-facebook-uses-to-target-ads-to-you/?utm_term=.cdb2c3910805

**<http://www.bbc.com/news/business-36854292>

***<http://www.bbc.com/news/technology-36671941>

Q: How do providers collect data on you and your Internet usage?

Q: Can Internet users hinder data collection about them and their online activities by an adequate set-up on their PC and smartphone?



The majority of Hungarian Internet users aged 16+ know that Internet service and content providers follow their online activities even without their consent. However, only a minority realize that solutions offered by service providers do not mean real protection (e.g., disabling cookies, browsing in incognito mode, deleting posts, emails, and chat logs).

Basis: Internet users, n=3105, N=5.8 m

Q: According to your experiences, to what extent information on the web is trustable?

Mostly trustable



There are much incorrect or fake information, but the majority is trustable



There are much correct and credible information, but the majority is not trustable



Mostly not trustable



Q: Which of the following statements is typical of you?

I basically believe information I read on the web.



I have reservation about information I read on the web.



I am suspicious of information I read on the web.

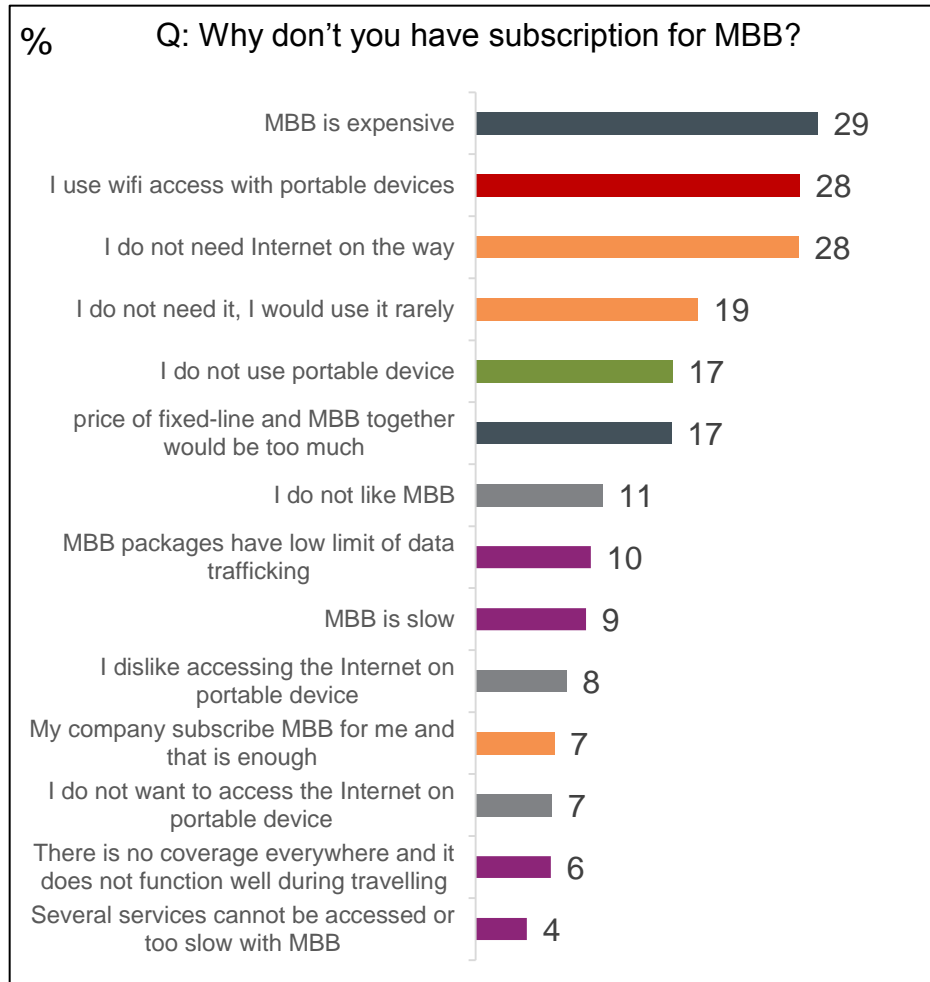


I basically do not believe information I read on the web.



- The vast majority of Hungarian Internet users trust information on the web and believe that they handle them with adequate reservation.
- These opinions do not correlate with age, skills of Internet usage or any other usual statistical characteristics.

Basis: Internet users, n=3105, N=5.8 m



Six reasons were mentioned by those not subscribing for MBB (those social groups are also presented here that mentioned the given reason more often than average):

- Reluctance to mobile technology – 19%
Aged 40+
- Lack of devices – 17%
Aged 50+, average and lower economic status
- Rival technology (wifi) – 28%
Aged 16-49
- Characteristics of MBB in Hungary – 19%
Aged 16-39
Average and more professional skills of Internet usage
Students
- Lifestyle – 47%
Aged 30+ (on maternity leave, housewives, retired)
- Money – 36%
Aged 16-39 and 60+
Lowest, lower-middle, and middle groups of subjective economic status
Students and unemployed

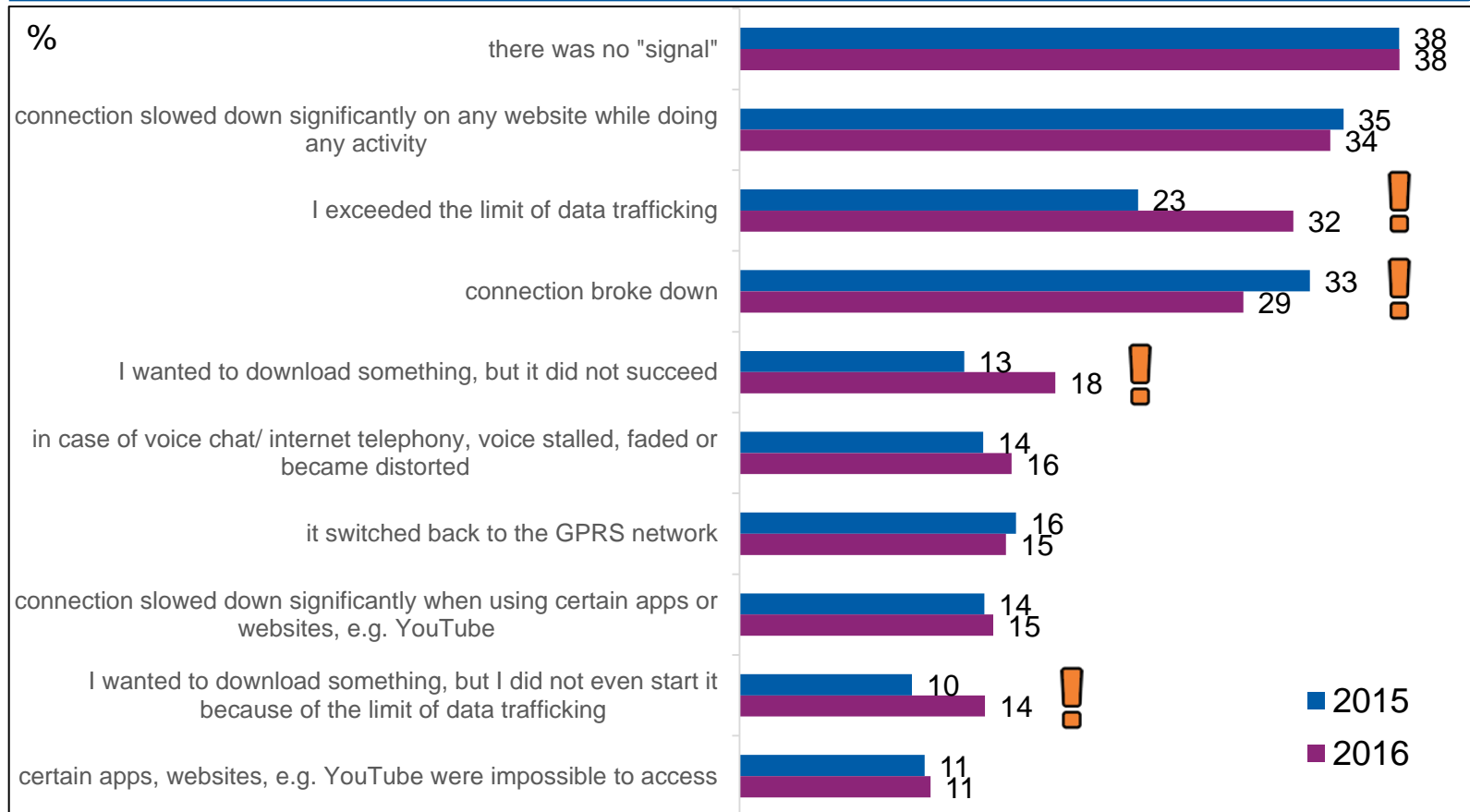
The relatively high price of the service compared to Hungarian wages seem to be a general hurdle of MBB subscription. As a second factor, older Internet users are rather reluctant to mobile devices and mobile technology while younger people are dissatisfied with the quality of the service compared to the price and can easily substitute it with free wifi.

Basis: Internet users who do not subscribe for MBB, n=1473, N=2.7 m

PROBLEMS WITH MBB: in the last 6 months

Impossibility to access and slow-down are the main problems with MBB. Complaints on break-down of the connection seem to happen less frequently than before. More users experienced problems that may be consequences of slow-down by service provider because of the large data traffic generated by users.

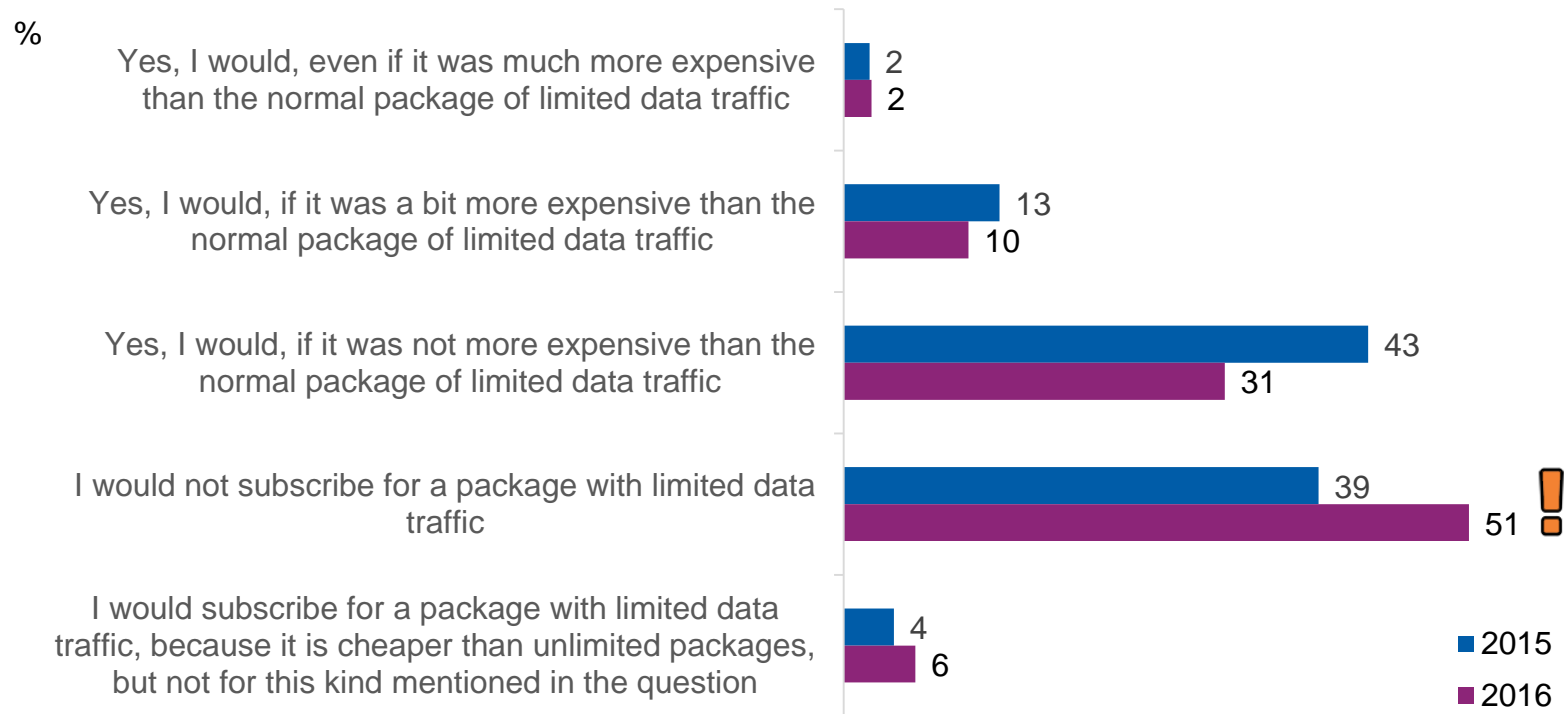
More customers noticed the slow-down of their MBB connection among clients of Telekom and Telenor than among subscribers of Vodafone.



Basis: MBB subscribers, n=1632, N=3 m

Internet users have become more reluctant to packages with limited data traffic compared to the year before. Two thirds of users who subscribe for fixed-line Internet only or who have no Internet at home and one third of MBB subscribers would not choose a package with limited data traffic.

Q: There are telephone packages with 'favorite numbers' service. Internet service providers may introduce similar packages in case of packages with limited data traffic. In this case, the use of certain websites and applications (e.g., Facebook, YouTube, file sharing, and chat programs) would not count into data traffic, thus, these could be used unlimited and without any slowdown by the service provider. Would you be willing to subscribe for this Internet package?



Basis: Internet users, n=3105, N=5.8 m