



NMHH

National Media and Infocommunications
Authority • Hungary

Electronic Communication Services Usage by Businesses, 2016

Research summary for the National Media and Infocommunications Authority
(Hungarian abbreviation: NMHH)

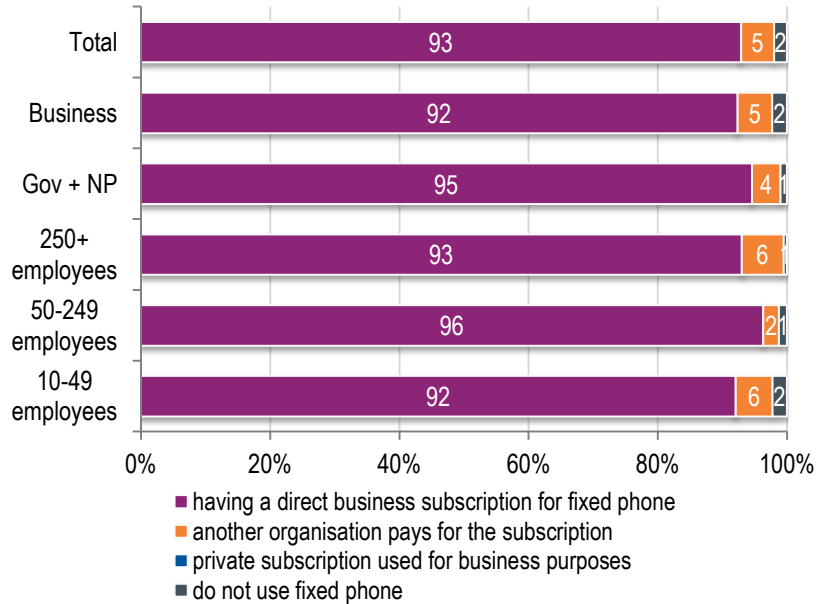
- Target groups: enterprises, public institutions and NGOs employing at least 10 persons
- Sampling: proportionally stratified by regions, not proportionally stratified by number of employees, legal form, and LTO areas. Simple random selection from each sub-segment
- Fieldwork: face-to-face interviews after contacting the interviewees by phone
- Interviewees: technical or general decision-makers in the fields of Information Technology and Telecommunications
- Number of interviews: 1500
- Fieldwork: 22nd August to 28th October 2016

	Universe	Sample size	Sampling error [±%]*
Total [10+]	41,248	1500	±2.5%
Business [10+]	31,543	1031	±3.0%
Government + non-profit [10+]	9705	469	±4.4%
250+ employees	1443	301	±5.0%
50-249 employees	7504	498	±4.2%
10-49 employees	32,301	701	±3.7%

*at 95% confidence level and taking into account the statistically worst distribution: 50%

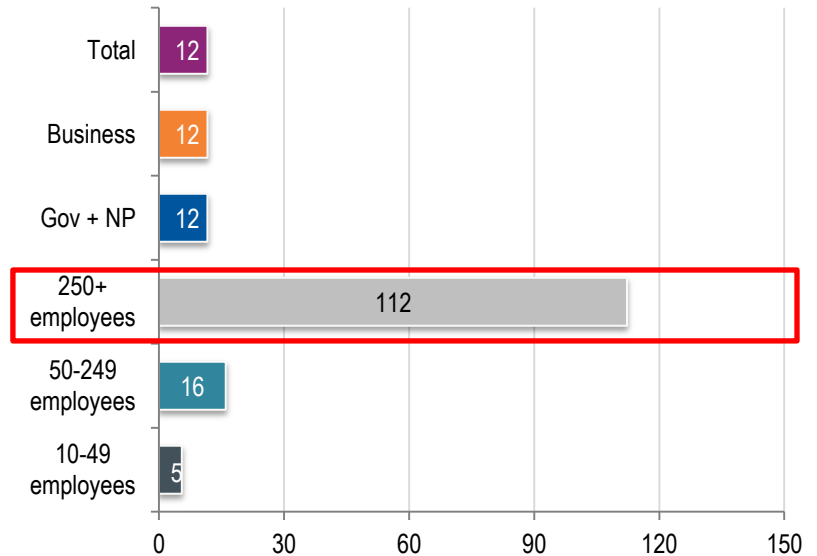
- Inaccuracies resulted from the disproportionate stratification and randomness of the fieldwork have been corrected by weighting, i.e. a mathematical-statistical procedure. Thus, our evidences represent the whole population regarding the number of employees, industry, regional distribution, LTO (incumbent operator) areas, and legal form.

Subscription and usage



Basis: all organisations, Total=41,248 [Business=31,543, Gov+NP=9705]
[250+ emp.=1443, 50-249 emp.=7504, 10-49 emp.=32,301]

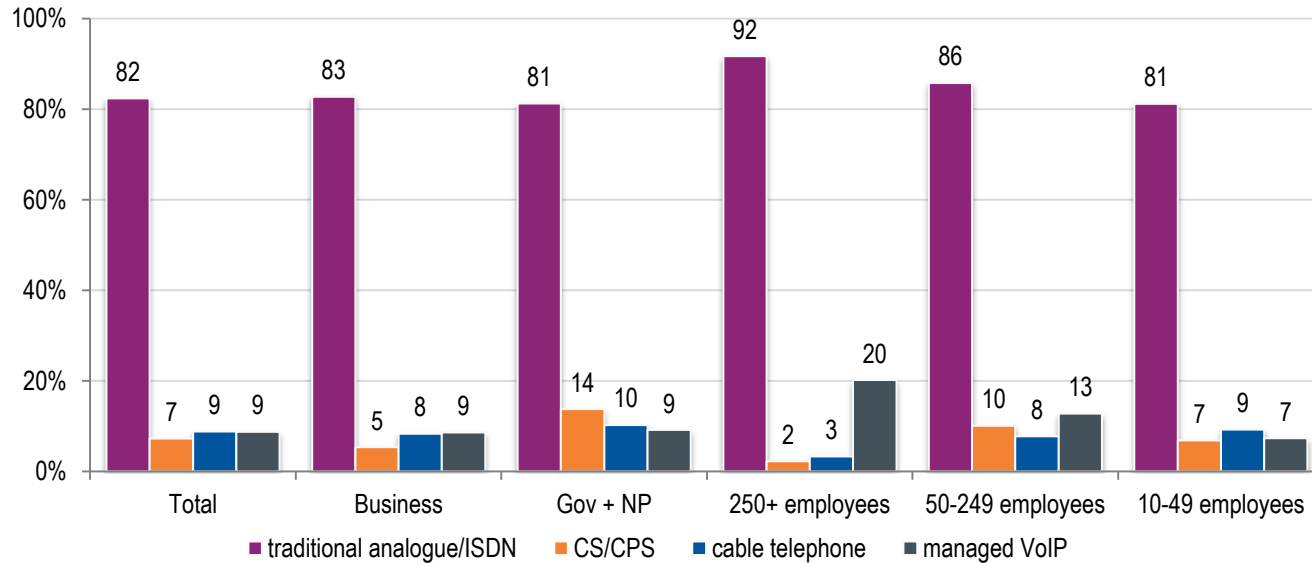
Average number of PSTN trunk lines [direct subscriptions]



Basis: organisations with direct subscription for analogue or ISDN lines, Total= 34,001
[Business=26,115, Gov+NP=7885] [250+ emp.=1323, 50-249 emp.=6440, 10-49 emp.=26,237]

- Practically, **all organisations use** fixed phone.
- The vast majority have a direct subscription [93%, c. 38 thousand organisations].
- Only 5% use a subscription for fixed phone of another organisation.
- In 2016, organisations maintain 12 **PSTN lines** on average which is **395 thousand in total**. It has not changed significantly compared to 2015.

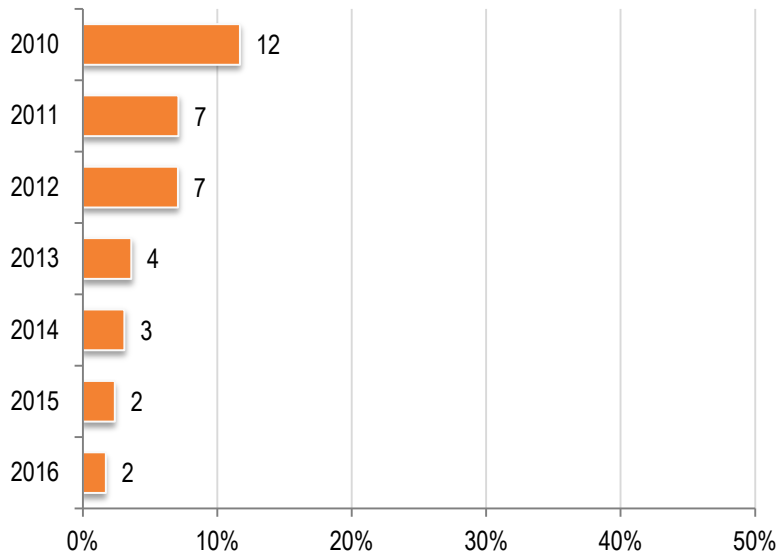
Penetration of fixed technologies [direct subscriptions]



Basis: all organisations, Total=41,248 [Business=31,543, Gov+NP=9705]
 [250+ emp.=1443, 50-249 emp.=7504, 10-49 emp.=32,301]

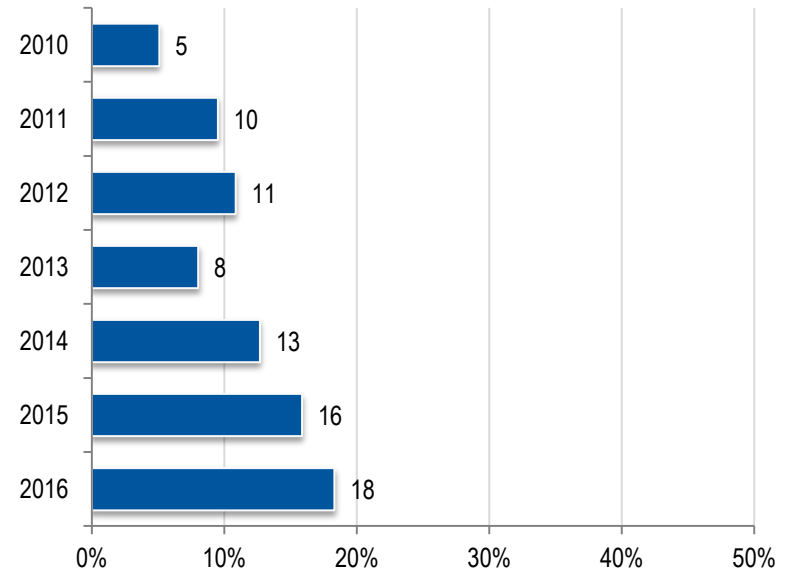
- **Traditional analogue and ISDN lines** are the most widespread: the vast majority of organisations with 10+ employees [82%, c. 34 thousand organisations] have these.
- Penetration of cable telephone and managed VoIP is only 9-9%, respectively. In case of organisations with at least 250 employees, penetration of managed VoIP makes up 20%.

Market share of CS/CPS services [%]



Basis: total expenditure on fixed telephony [m HUF], varies by year

Market share of VoIP services [%]

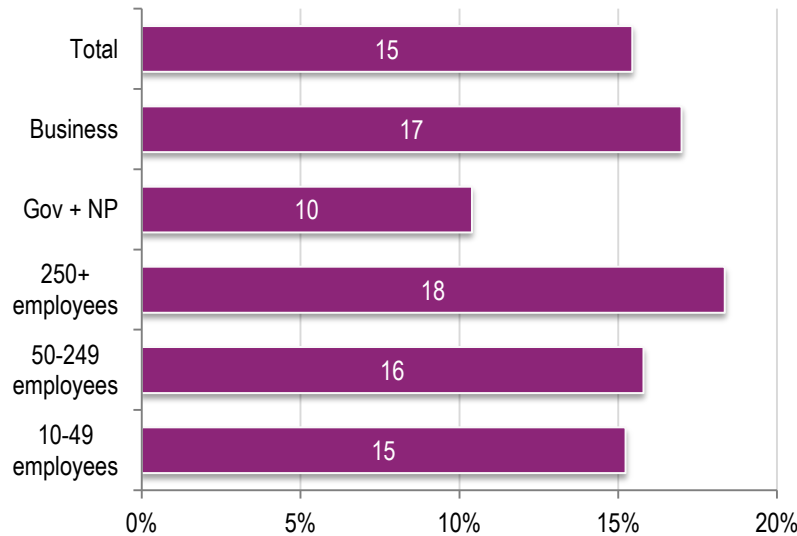


Basis: total expenditure on fixed telephony [m HUF], varies by year

- In parallel with the decline of the fixed telephony market, the position of CS/CPS services and service providers appears to be more and more marginalized.
- Regarding business expenditures, possible savings by CS/CPS are getting less and less significant both in absolute and relative terms. As a result, **this business model is less and less sustainable**.
- **In contrast, VoIP services are more and more significant** and what is more, it may be anticipated that incumbent operators will sooner or later start mass migration of subscribers from PSTN to VoIP.

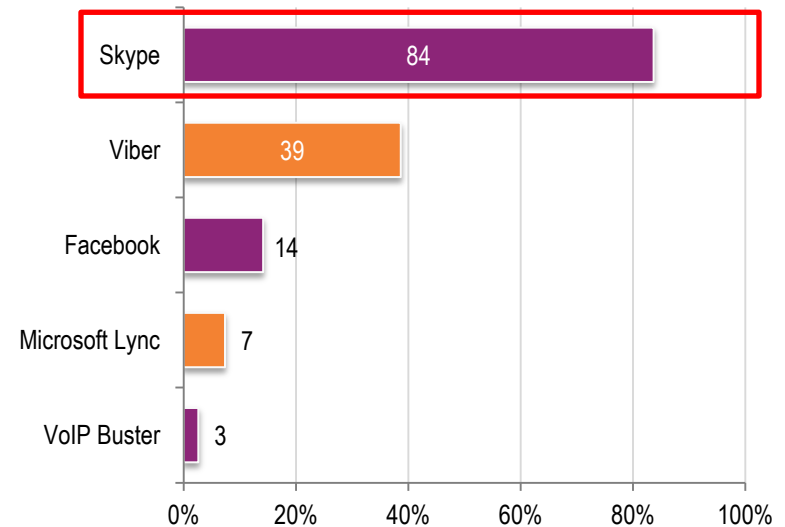
VoIN: VoIN is defined here as phone calls via the Internet, e.g. with Skype, etc. In case of VoIN, no contract is necessary with service providers, the softwares/applications are downloaded and used on PCs with Internet access, the quality of services is not guaranteed though.

Proportion of VoIN users



Basis: all organisations, Total=41,248 [Business=31,543, Gov+NP=9705]
[250+ emp.=1443, 50-249 emp.=7504, 10-49 emp.=32,301]

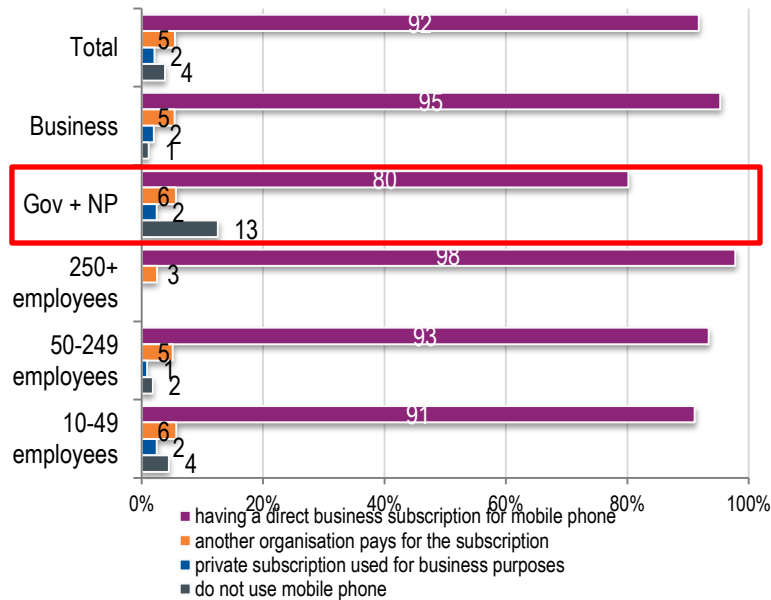
Programs used for VoIN communications [Top5]



Basis: organisations using VoIN, Total=6370

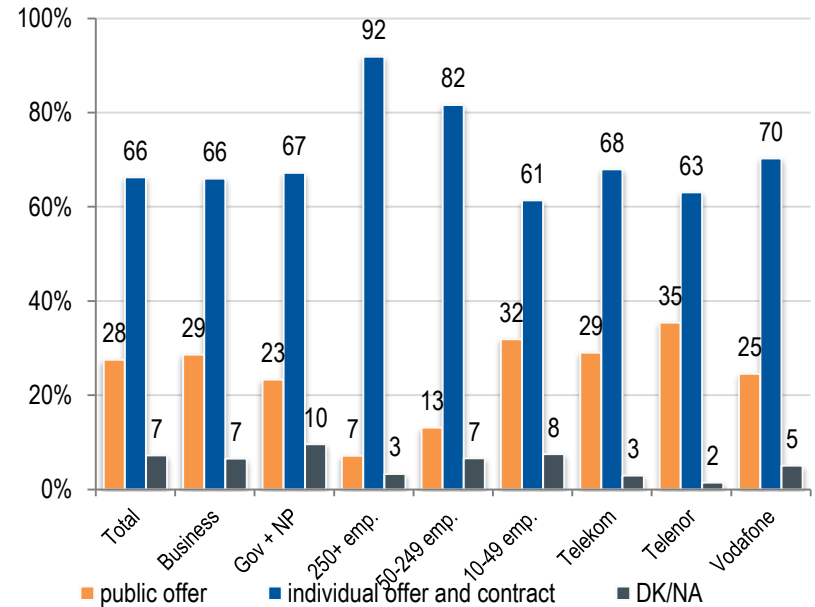
- One out of six organisations uses VoIN services at least occasionally. It is more popular in the business sector than among public and non-profit organisations.
- Skype is still the only major player in this field, most companies and institutions use this software. Viber and Facebook are also popular.

Subscription and usage



Basis: all organisations, Total=41,248 [Business=31,543, Gov+NP=9705] [250+ emp.=1443, 50-249 emp.=7504, 10-49 emp.=32,301]

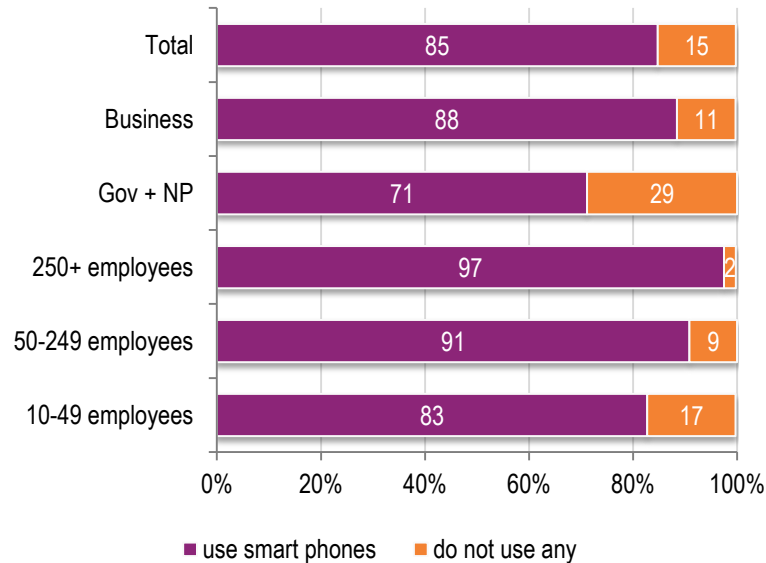
Public and individual offers [according to respondents]



Basis: organisations with direct subscription for mobile phone, Total=39,659 [Business=31,174, Gov+NP=8485] [250+ emp.=1443, 50-249 emp.=7366, 10-49 emp.=30,849]

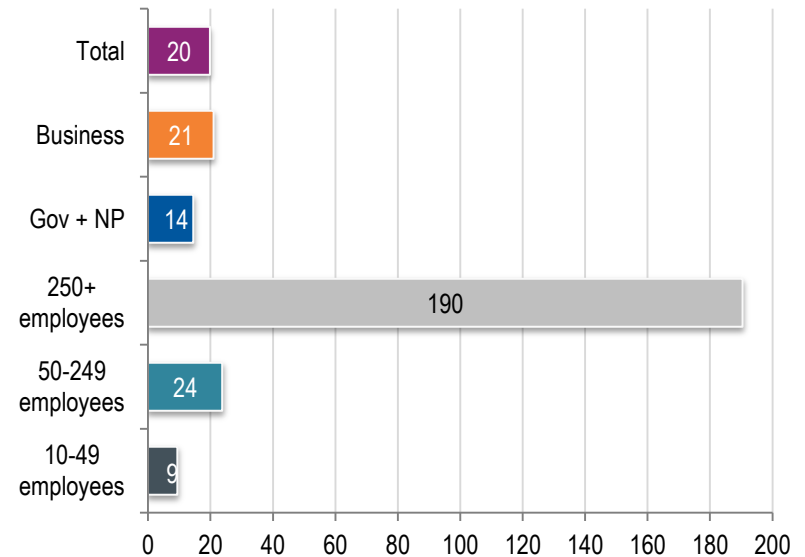
- The use of mobile phone is rather widespread in the population we focused on in the survey [public institutions and non-profit organisations are a bit exceptional as 13% of them do not use mobile voice service]. Penetration **has not changed significantly** since 2015.
- **Two thirds** of the organisations believe to **have received an individual offer** from the service provider. In case of organisations with at least 250 employees, it seems to be taken for granted.

Smart phone usage



Basis: organisations with direct subscription for mobile phone, Total=39,659
 [Business=31,174, Gov+NP=8485] [250+ emp.=1443, 50-249 emp.=7366,
 10-49 emp.=30,849]

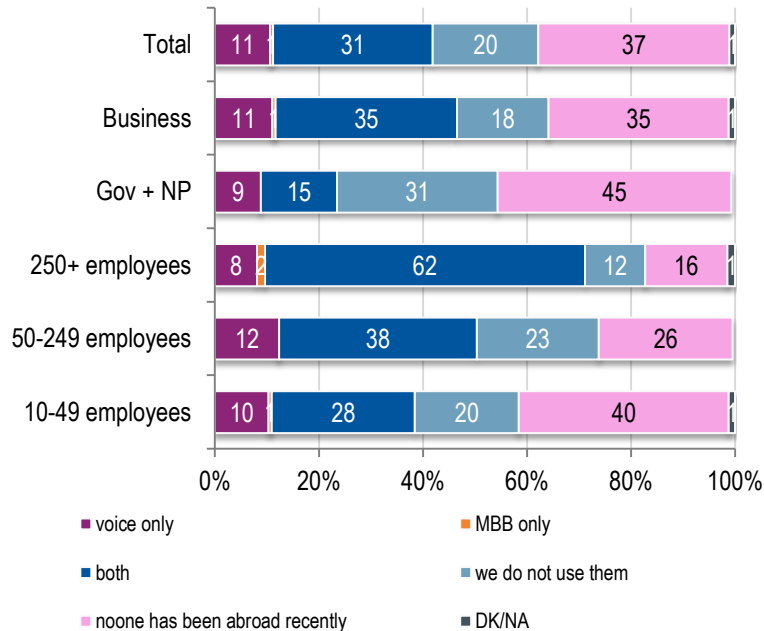
Average number of smart phones



Basis: organisations using smart phones, Total=33,612
 [Business=27,573, Gov+NP=6039] [250+ emp.=1407, 50-249 emp.=6693,
 10-49 emp.=25,512]

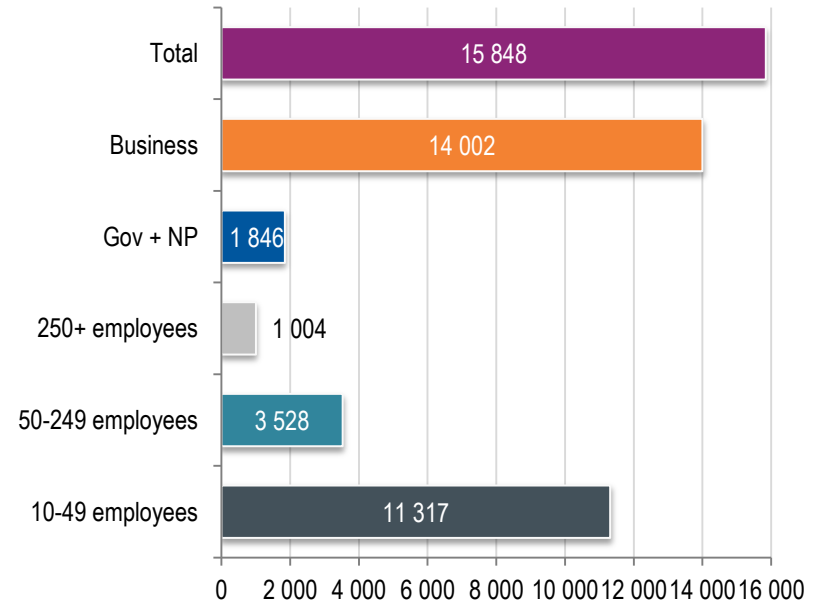
- 85% of organisations with direct mobile subscription use smart phones while this proportion is lower among public and non-profit organisations: 71%. Nearly all organisations with 250+ employees have smart phones [97%] [besides, they have the highest rate of smart phones: 190 pieces on average] and this proportion correlates with the number of employees.
- In sum, organisations have 667,000 smart phones altogether.

Do you use business mobiles abroad for business purposes?



Basis: organisations with direct subscription for mobile phone
 Total=37,847 [Business=30,068, Gov+NP=7780] [250+ emp.=1411, 50-249 emp.=7008, 10-49 emp.=29,429]

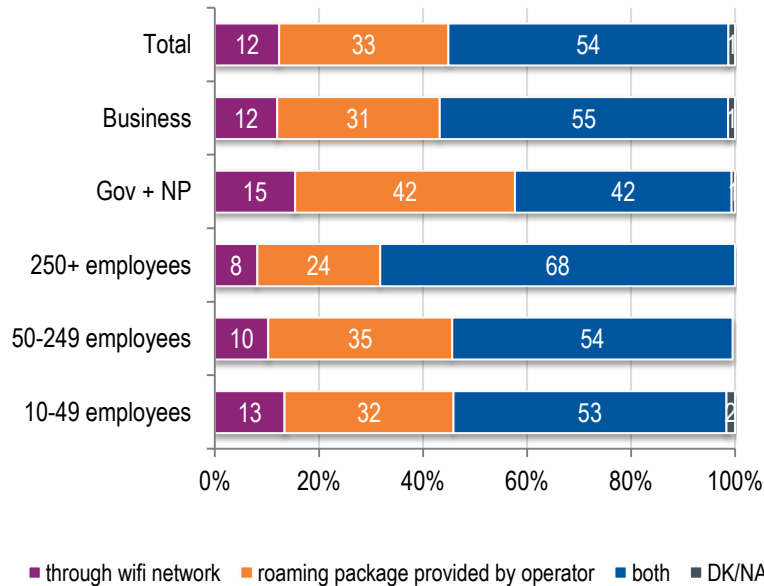
Roaming [number of organisations]



Basis: organisations with direct subscription for mobile phone
 Total=37,847 [Business=30,068, Gov+NP=7780] [250+ emp.=1411, 50-249 emp.=7008, 10-49 emp.=29,429]

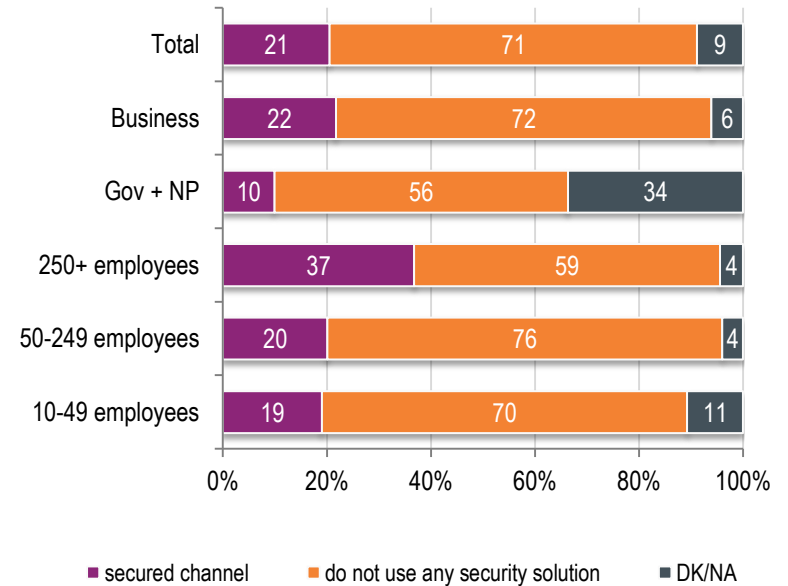
- 42% of organisations [c.16,000 organisations] use business mobiles abroad for business purposes. Roaming is the most widespread among organisations with 250+ employees [71%, c. 1000 organisations]. There is a correlation between the number of employees and the proportion of roaming usage.

How do you use your mobile phones abroad?



Basis: organisations roaming abroad, Total=15,848 [Business=14,002, Gov+NP=1846] [250+ emp.=1004, 50-249 emp.=3528, 10-49 emp.=11,317]

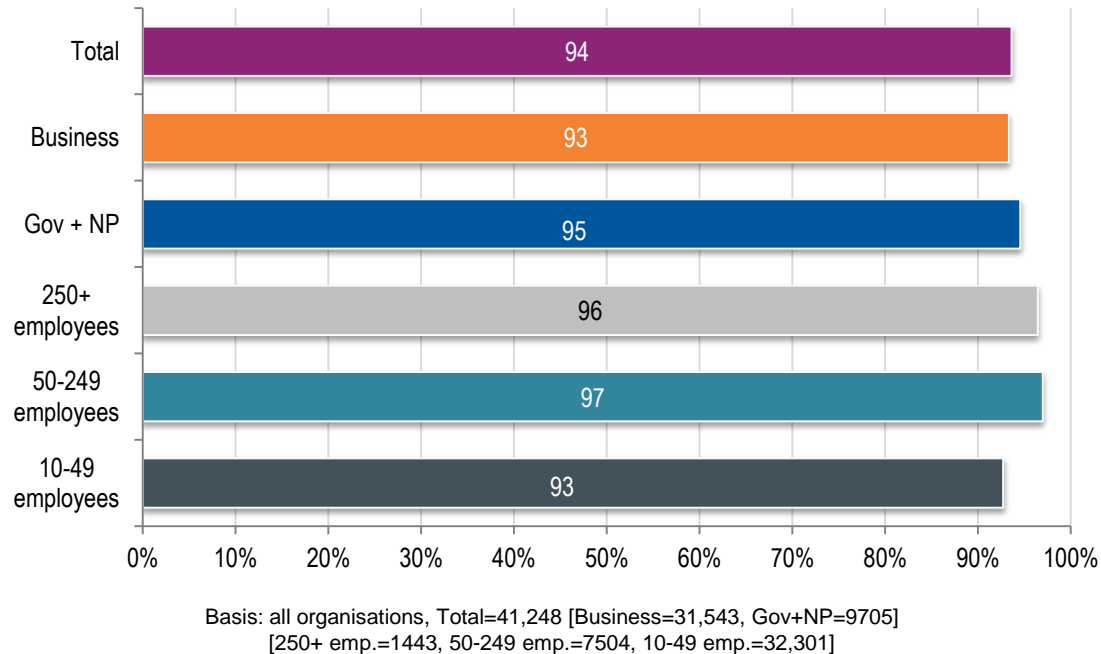
When accessing a wifi network abroad, what solution do you use to make Internet usage secure?



Basis: organisations accessing wifi networks when roaming, Total=10,488

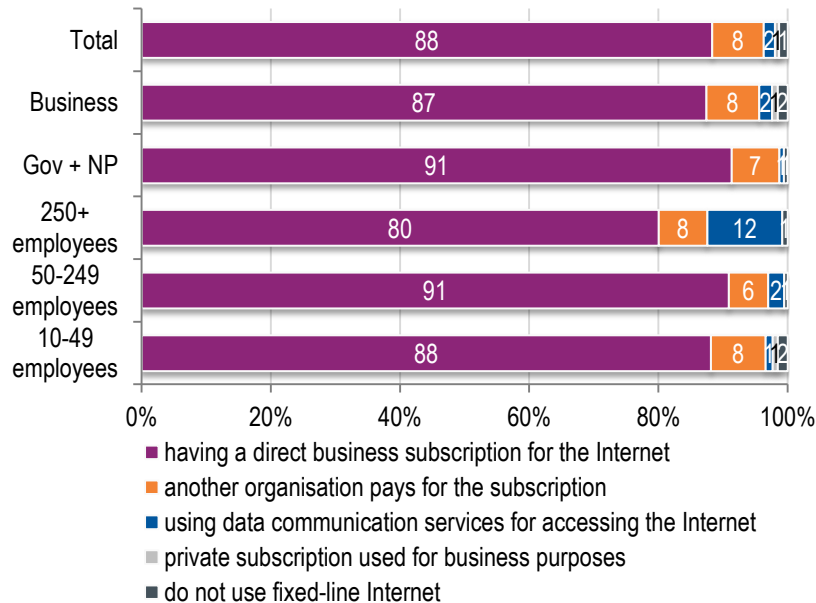
- More than half of organisations roaming abroad **use both local wifi network and a roaming package provided by their operator**. It is a bit more likely among businesses and organisations with 250+ employees. Although, the proportion of wifi users is much lower than of those using roaming package in all segments.
- Nearly three-quarter of respective organisations do not use any kind of security solution when accessing the Internet abroad and **only 21% use secured channels**.

Direct subscriptions for the Internet [regardless of the technology of Internet access]



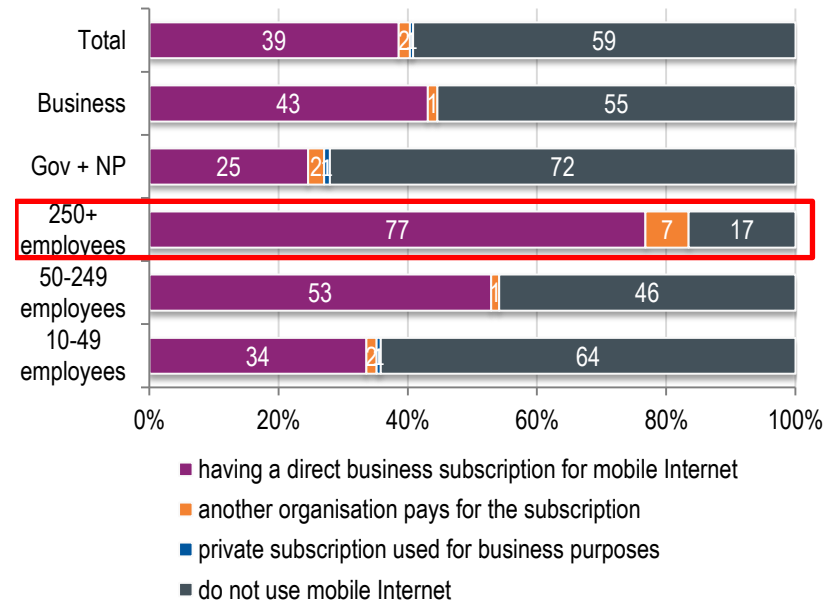
- The vast majority [94%, c. 39 thousand] of organisations having at least ten employees have direct Internet access while **the number of organisations using the Internet is about 41 thousand [across-the-board]**. In 2016, penetration has not changed significantly compared to 2015.
- Share of direct subscriptions is about the same in the business sector and in the public and non-profit sector.
- The size of organisations does not seem to have an effect on penetration.

Fixed-line Internet | Subscription and usage



Basis: all organisations, Total=41,248 [Business=31,543, Gov+NP=9705]
[250+ emp.=1443, 50-249 emp.=7504, 10-49 emp.=32,301]

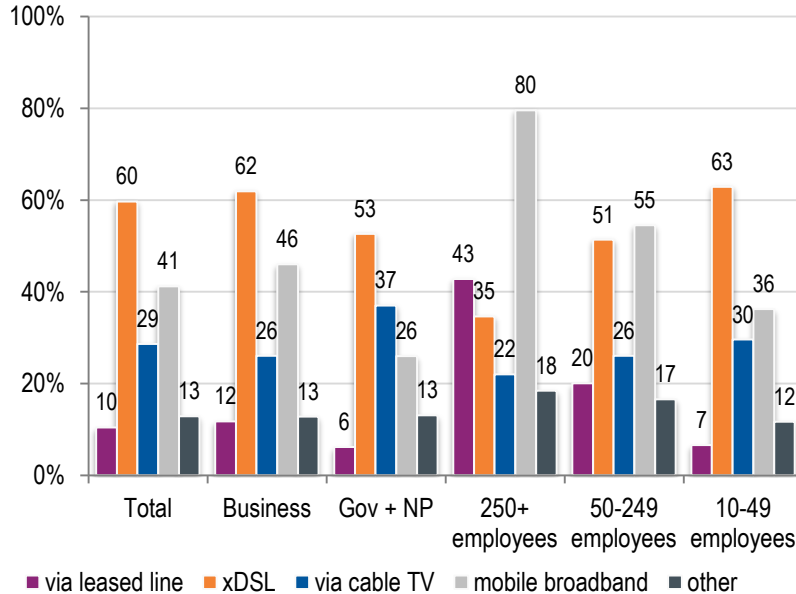
Mobile Internet | Subscription and usage



Basis: all organisations, Total=41,248 [Business=31,543, Gov+NP=9705]
[250+ emp.=1443, 50-249 emp.=7504, 10-49 emp.=32,301]

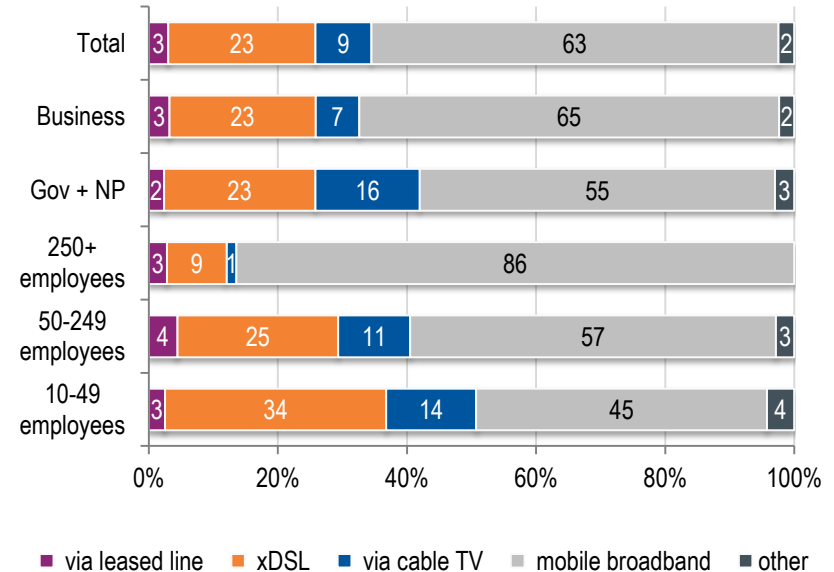
- The vast majority [88%, c. 36 thousand] of organisations having at least ten employees have direct subscription for fixed-line Internet access and 39% have direct subscription for MBB.
- MBB usage is lower in the public and non-profit sector, it makes up only 25%.
- Mobile broadband is rather widespread, nearly 77% of organisations with 250+ employees have a direct subscription.

Penetration of Internet technologies



Basis: organisations with direct subscription for the Internet, Total=38,614 [Business=29,437, Gov+NP=9177] [250+ emp.=1392, 50-249 emp.=7277, 10-49 emp.=29,945]

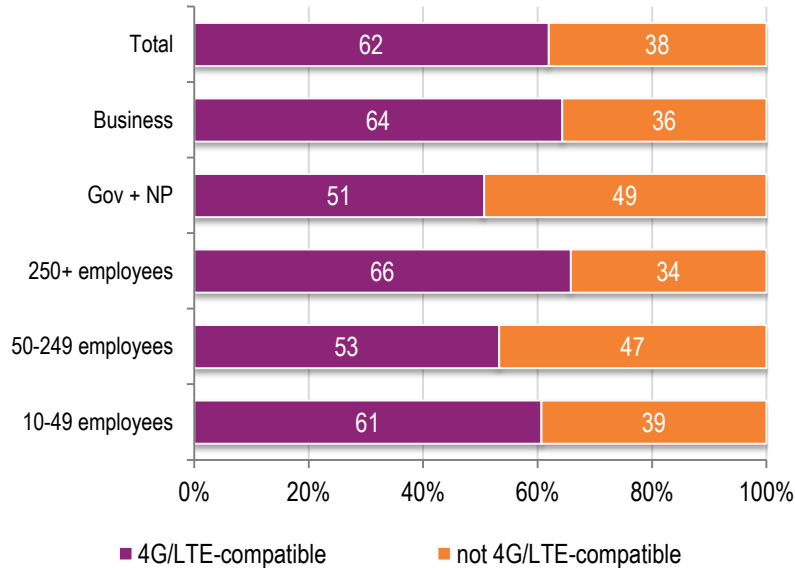
Shares of direct subscriptions for the Internet by technology



Basis: number of direct subscriptions for the Internet, Total=202,937 [Business=162,385, Gov+NP=40,552] [250+ emp.=76,840, 50-249 emp.=42,863, 10-49 emp.=83,234]

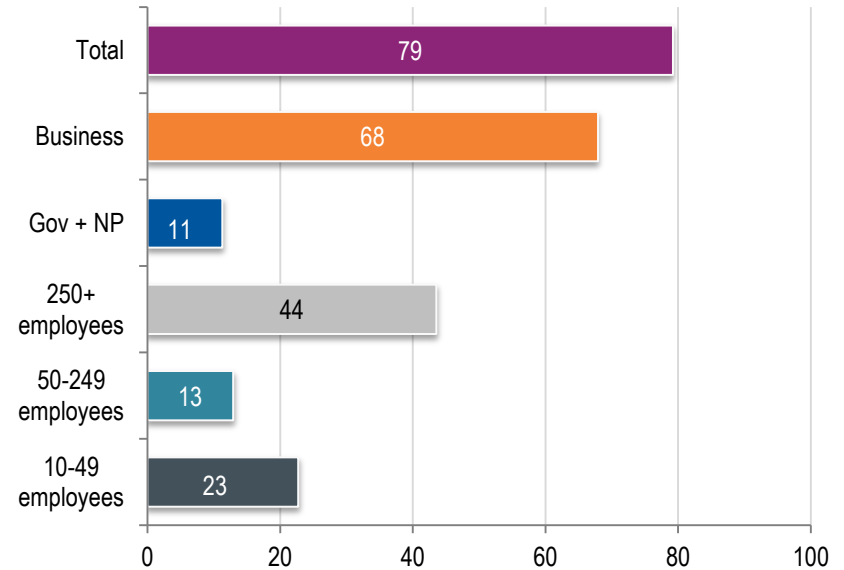
- Regarding the shares of organisations with direct subscription, **DSL is still the most widespread access technology [60%]**, but in case of organisations with more than 249 employees, penetration of mobile Internet has been already higher [80%]. Since 2015, penetration of other technologies has not changed significantly.
- Regarding the number of direct subscriptions, mobile broadband makes up the majority while DSL, although being the leading technology, takes up only 23%. It is important to add, however, that **MBB is rather for individual usage** while other technologies ensure simultaneous Internet access for a bigger amount of users.

4G/LTE-compatible SIMs



Basis: number of direct subscriptions for MBB, Total=127,956
 [Business=105,637, Gov+NP=22,319] [250+ emp.=66,184,
 50-249 emp.=24,286, 10-49 emp.=37,486]

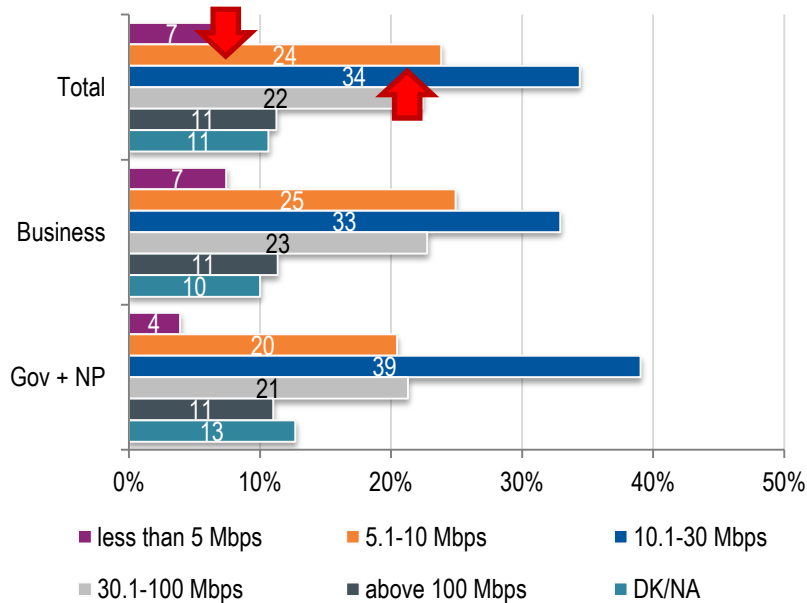
Number of 4G/LTE-compatible SIMs ['000]



Basis: number of direct subscriptions for MBB, Total=127,956
 [Business=105,637, Gov+NP=22,319] [250+ emp.=66,184,
 50-249 emp.=24,286, 10-49 emp.=37,486]

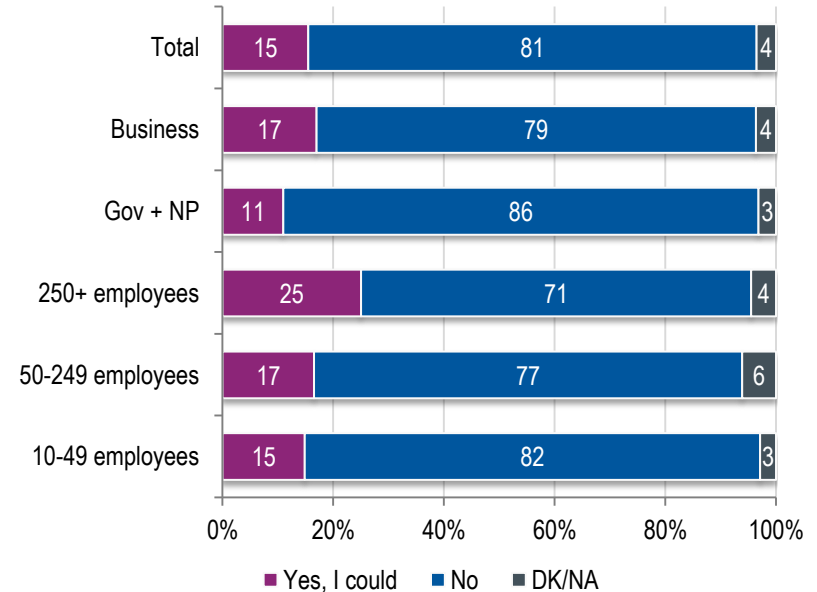
- Nearly two-third of the subscriptions for large screen MBB [c. 128,000 SIMs] are 4G/LTE-compatible which is about 79,000 SIMs. Since 2015, it has increased significantly, the upgrade has been fast.
- Increase can be noticed in all segments which indicates well the importance of bandwidth and usability of MBB.

Maximum speed of fixed-line Internet subscriptions



Basis: organisations with direct subscription for fixed-line Internet, Total=36,434 [Business=27,571, Gov+NP=8862] [250+ emp.=1155, 50-249 emp.=6811, 10-49 emp.=28,468]

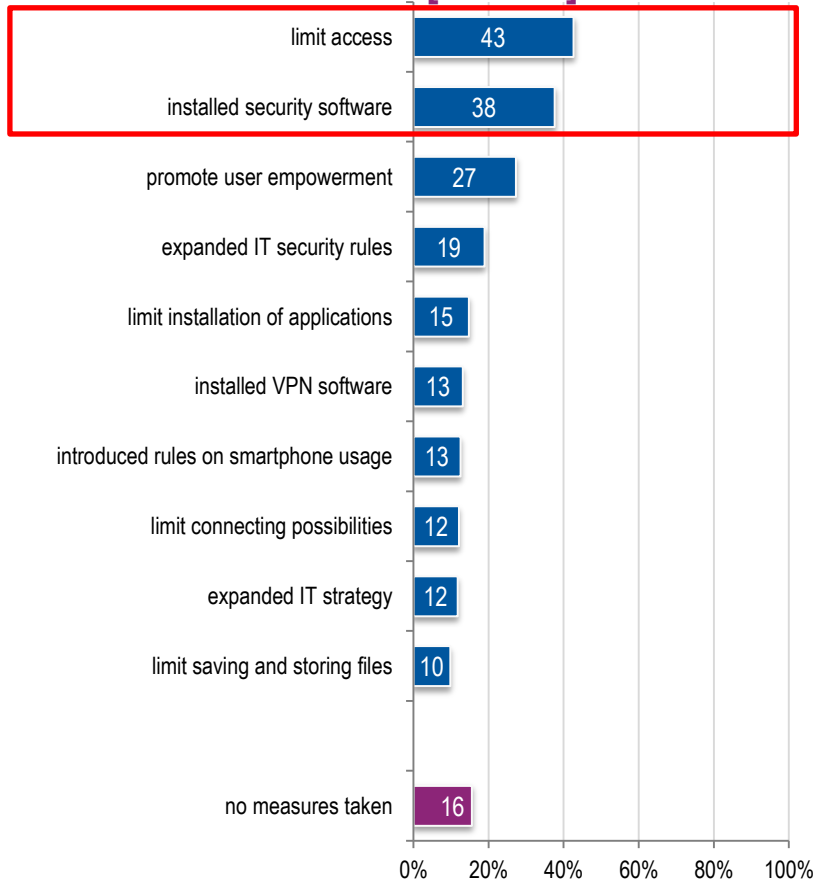
Could you imagine that the organisation switches to a higher speed package in the following 12 months?



Basis: organisations with direct subscription for fixed-line Internet, Total=36,434 [Business=27,571, Gov+NP=8862] [250+ emp.=1155, 50-249 emp.=6811, 10-49 emp.=28,468]

- 92% of organisations having a direct subscription for fixed-line Internet connection have more than 5 Mbps as maximum speed in their package while only 7% have a maximum speed up to 5 Mbps.
- Four fifths of organisations could not imagine to switch to a higher speed Internet package in the next 12 months.
- 25% of organisations with 250+ employees plan to upgrade their Internet package.

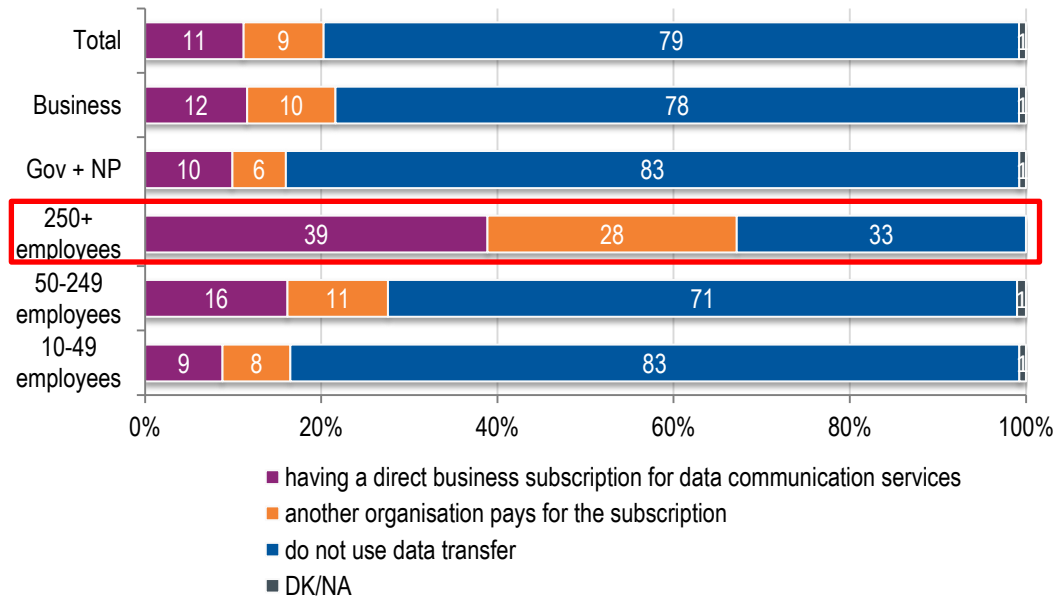
How do you defend your information system against possible attacks through smart devices? [TOP 10]



- The measures taken by most organisations to avoid possible attacks against their system through smart devices are limiting **access** to the system and the obligatory use of **security softwares**.
- It is alarming that **three-fourth** of the respective organisations **do not deal with** promoting user empowerment **at all**.
- Besides, it is also notable that one sixth of the respective organisations do not take any measures to protect their information system against possible attacks through smart devices.

Basis: organisations opening their information system at least partly for smart devices, Total=16,635

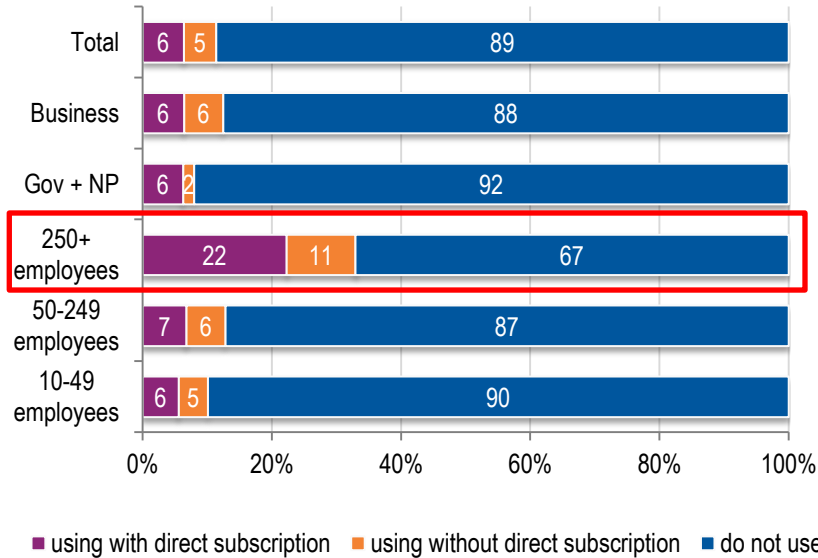
Subscription and usage



Basis: all organisations, Total=41,248 [Business=31,543, Gov+NP=9705] [250+ emp.=1443, 50-249 emp.=7504, 10-49 emp.=32,301]

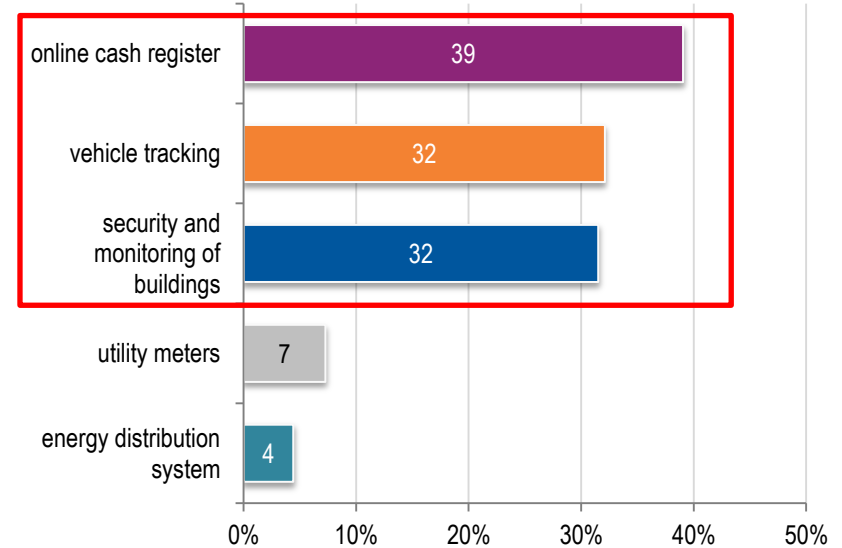
- 11%, i.e. about 4.6 thousand businesses, public institutions, and non-profit organisations with 10+ employees use data transfer services with direct subscription.
- Another 9% of the respective organisations use the subscription of another organisation or have a solution of their own.

Subscription and usage of M2M communication cards



Basis: all organisations, Total=41,248 [Business=31,543, Gov+NP=9705], [250+ emp.=1443, 50-249 emp.=7504, 10-49 emp.=32,301]

Main functions of using M2M communication cards [TOP 5]*

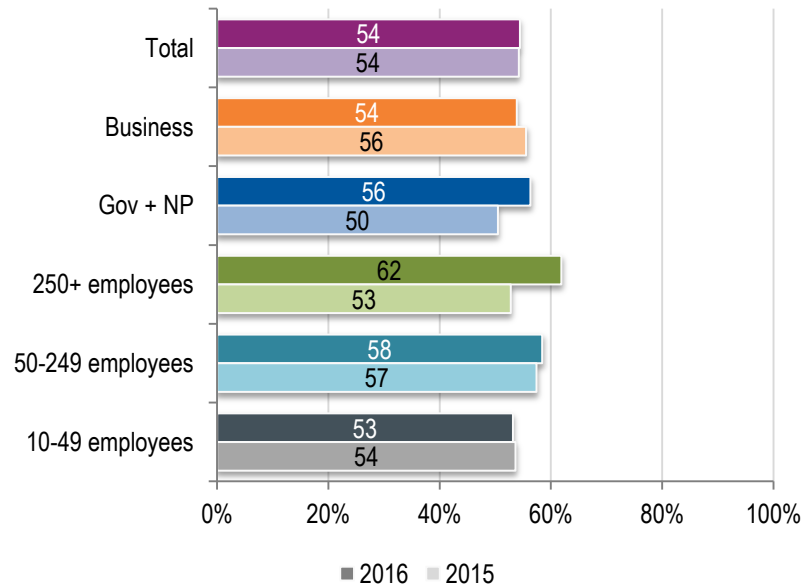


Basis: organisations with subscription for machine-to-machine communication cards, Total=4704 [Business=3932, Gov+NP=772] [250+ emp.=475, 50-249 emp.=961, 10-49 emp.=3268]

- 11%, i.e. 4700 organisations use machine-to-machine communication cards while 6% have a direct subscription. Organisations using M2M communication cards have a direct subscription for about 181,000 SIM cards.
- Organisations use M2M SIM cards mostly for operating online cash registers, for vehicle tracking and security and monitoring of buildings.

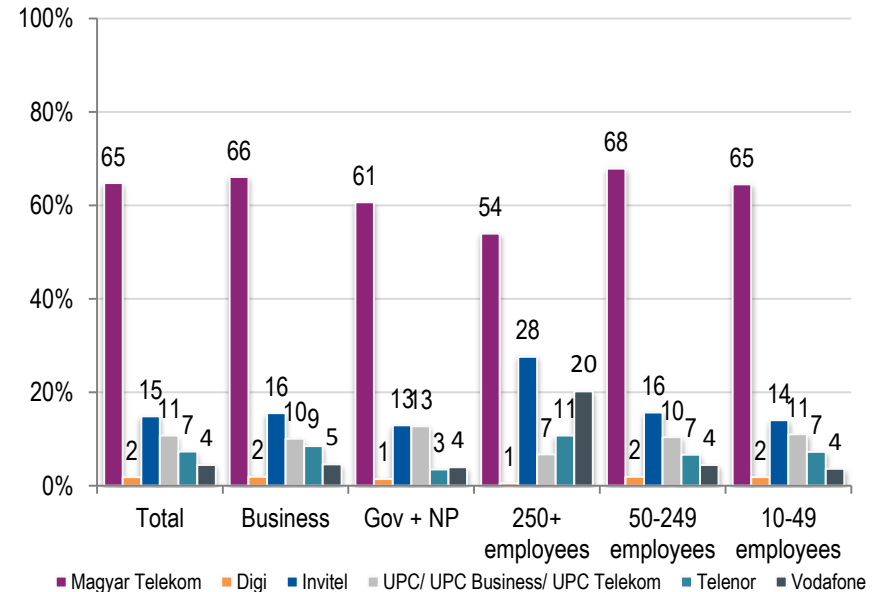
*Data need to be handled carefully because of the low number of respondents

Penetration of bundles



Basis: all organisations, Total=41,248 [Business=31,543, Gov+NP=9705], [250+ emp.=1443, 50-249 emp.=7504, 10-49 emp.=32,301]

Relation to service providers



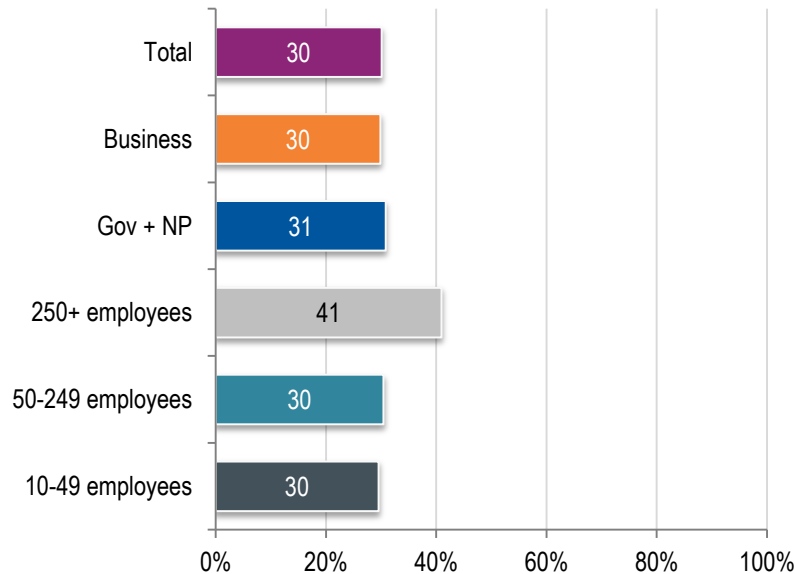
Basis: organisations having services in bundle, Total=22,449 [Business=16,986, Gov+NP=5463] [250+ emp.=893, 50-249 emp.=4383, 10-49 emp.=17,173]

- **54%** of organisations with at least 10 employees use electronic communication services in bundle. It means **about 22.4 thousand** enterprises, public institutions, and non-profit organisations. This proportion has not changed compared to the year before.
- **Two thirds** of organisations using bundled services are clients of **Magyar Telekom**. 15% subscribe for bundled services at Invitel.
- UPC, Telenor, Vodafone, and Digi still have a lower number of clients with bundled services.



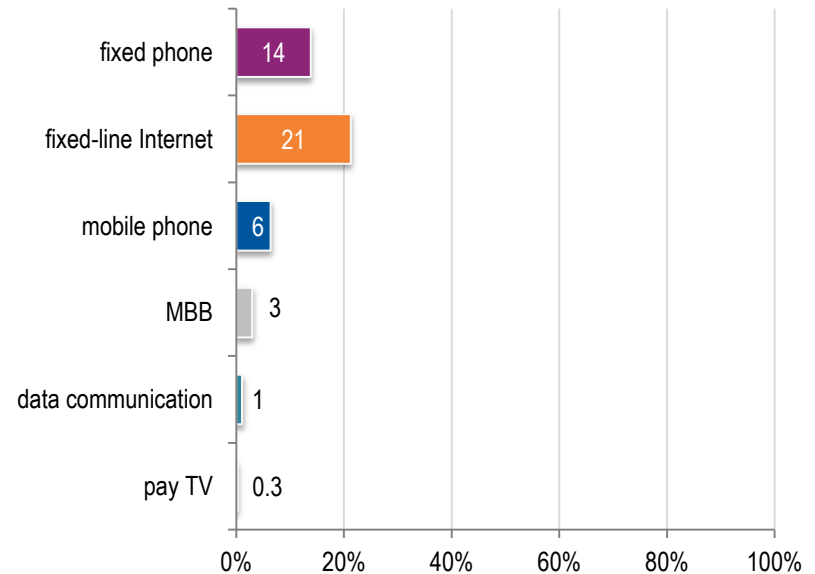
Consumer Complaints | Problem with Services

Experienced any problem with electronic communication services in the last 12 months



Basis: all organisations, Total=41,248 [Business=31,543, Gov+NP=9705]
[250+ emp.=1443, 50-249 emp.=7504, 10-49 emp.=32,301]

Problems experienced in the last 12 months by services



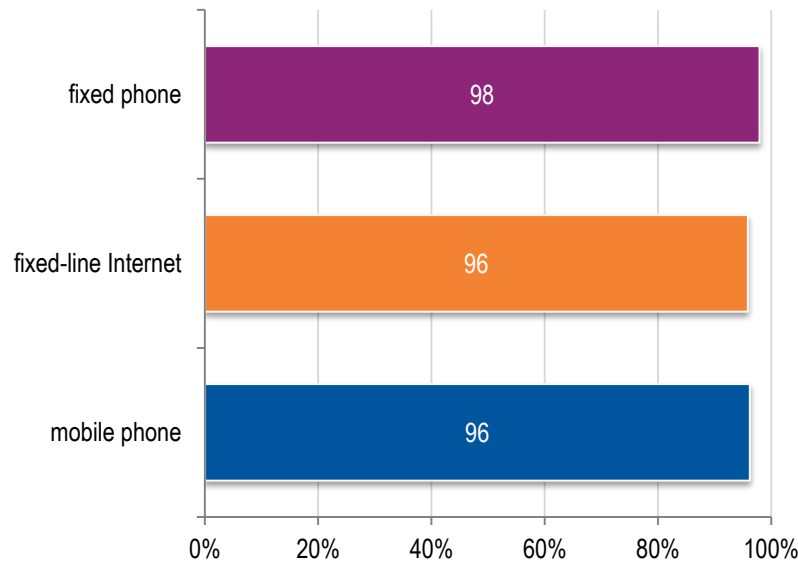
Basis: all organisations, Total=41,248 [Business=31,543, Gov+NP=9705]
[250+ emp.=1443, 50-249 emp.=7504, 10-49 emp.=32,301]

- About **one third** of organisations **experienced some kind of problem** with electronic communication services during the year before the survey.
- More organisations perceived problems with **fixed-line Internet** and **fixed phone** while mobile telephony caused less annoyances, according to consumers.



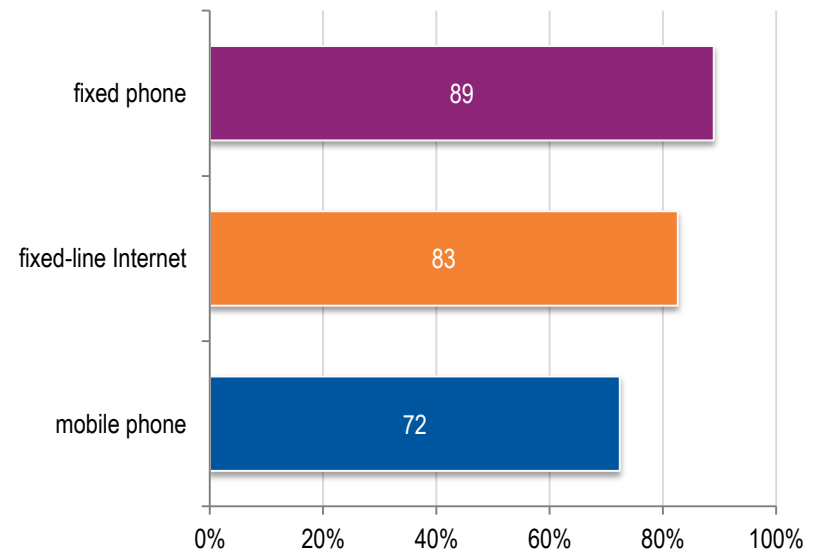
Consumer Complaints | Complaint Resolution

In case of a problem, have you contacted the service provider?



Basis: organisation experienced problem with the given service

Proportion of complaints resolved to consumers' satisfaction



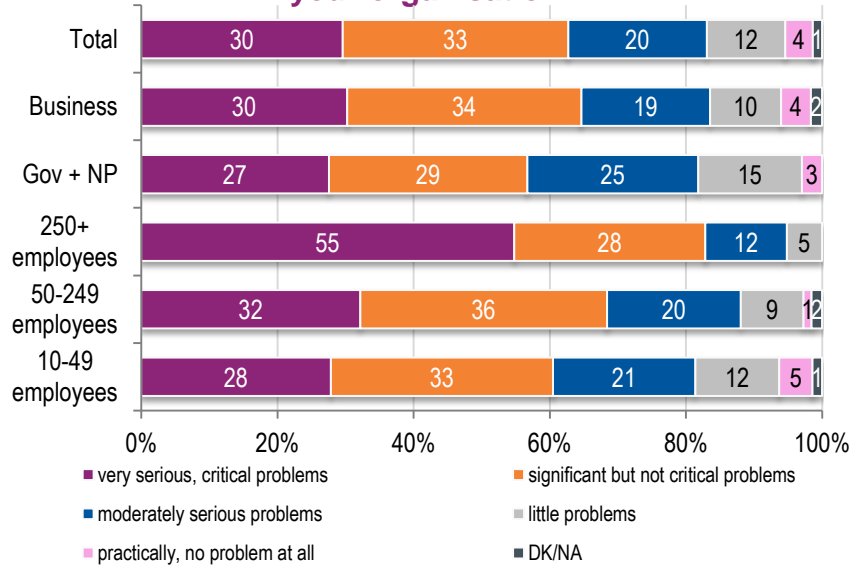
Basis: organisations reported the problem with the given service to the operator

- In case of a problem with the service, the vast majority of organisations **contacted their service provider**.
- The majority of complaints and disputes were **resolved to the consumers' satisfaction**.



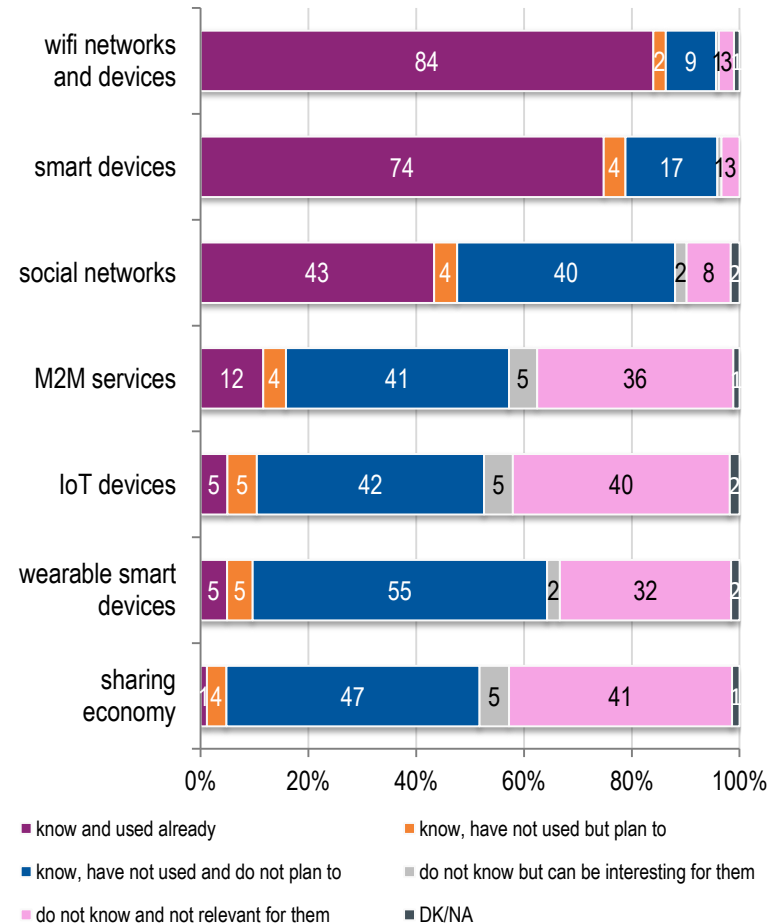
Consumer Attitudes | Services Supporting Business Activities

What problems do a breakdown in electronic communication and/or IT services would cause to your organisation?



Basis: all organisations, Total=41,248 [Business=31,543, Gov+NP=9705]
[250+ emp.=1443, 50-249 emp.=7504, 10-49 emp.=32,301]

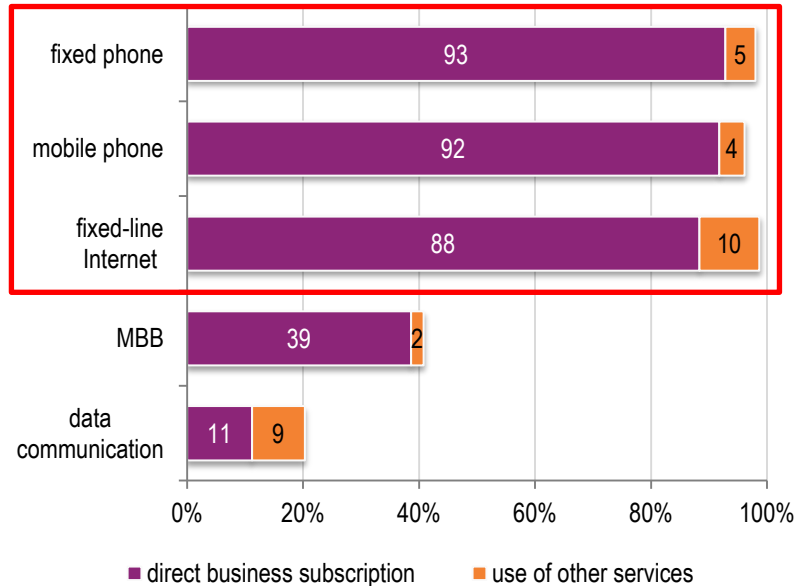
Awareness and use of new technologies and services supporting business processes?



Basis: all organisations, Total=41,248 [Business=31,543, Gov+NP=9705]
[250+ emp.=1443, 50-249 emp.=7504, 10-49 emp.=32,301]

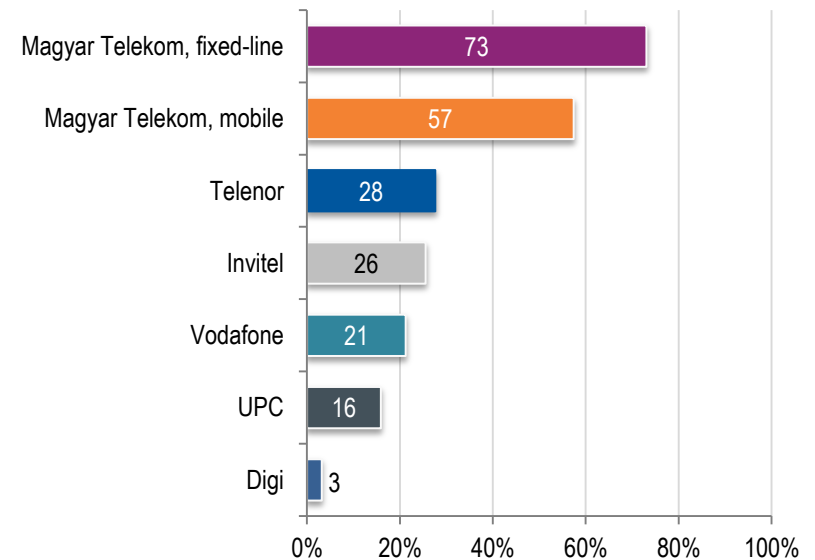
- A **breakdown** in electronic communication and/or IT services would cause a critical situation for 30% of the organisations. This proportion makes up to 55% among organisations with 250+ employees.
- **Wifi networks** and **smart devices** are the most widespread new technologies supporting business processes. Also many organisations use social networks for business purposes [43%].

Penetration of electronic communication services



Basis: all organisations, Total=41,248 [Business=31,543, Gov+NP=9705]
[250+ emp.=1443, 50-249 emp.=7504, 10-49 emp.=32,301]

Direct business subscribers of all electronic communication services at the most significant service providers



Basis: organisations having at least one electronic communication service,
Total=40,692 [Business=31,187, Gov+NP=9505] [250+ emp.=1438,
50-249 emp.=7437, 10-49 emp.=31,817]

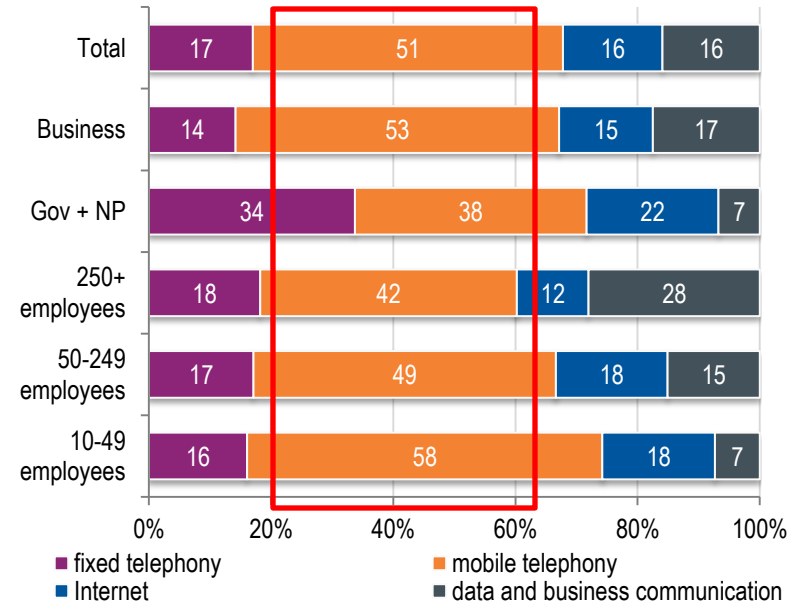
- Practically, all organisations with at least 10 employees use fixed phone, mobile phone, and fixed-line Internet while **about two-fifth have MBB service** (excluding smartphones). Only data communications services are less widespread, but 20% of organisations still use them.
- **Magyar Telekom** [fixed-line: c 29.7 thousand clients, mobile: c 23.3 thousand clients] have the most favourable positions in the market regarding the proportion of subscribers. Telenor and Invitel have the third and fourth place with 11.2 and 10.4 thousand clients, respectively.

The market of electronic communication services in 2016 [net sum, million HUF]

	Fixed telephony	Mobile telephony	Internet	Data and business communication	Total
Business	15,851	59,109	17,181	19,528	111,668
Gov + NP	6415	7222	4112	1288	19,036
250+ emp.	7452	17,202	4804	11,465	40,922
50-249 emp.	6071	17,532	6477	5356	35,436
10-49 emp.	8743	31,596	10,012	3994	54,346
Total	22,266	66,330	21,292	20,815	130,704

Basis: total expenditure on electronic communication services in 2016 [m HUF], Total=130,704 [Business=111,668, Gov+NP=19,036] [250+ emp.=40,922, 50-249 emp.=35,436, 10-49 emp.=54,346]

Structure of the market



Basis: total expenditure on electronic communication services in 2016 [m HUF], Total=130,704 [Business=111,668, Gov+NP=19,036] [250+ emp.=40,922, 50-249 emp.=35,436, 10-49 emp.=54,346]

- The whole market of electronic communication services can be estimated to be about 131 billion HUF. Mobile telephony takes the largest part [51%] while fixed telephony makes up 17%, data communications and Internet services make up 16-16% of the market, respectively.
- Expenditure on fixed-line services are overrepresented in the public and non-profit sector. In parallel, their expenditure on mobile services makes up a lower market share.
- Expenditure on data communication services of organisations with 250+ employees contributes above average to the whole market.