

DOBERMAN

Adopting Mobile Internet? - Findings from a study on
Mobile Internet services using a user centred perspective

Survey results

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Adopting Mobile Internet?
Survey results
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Survey on Mobile Internet usage – results

01. Introduction

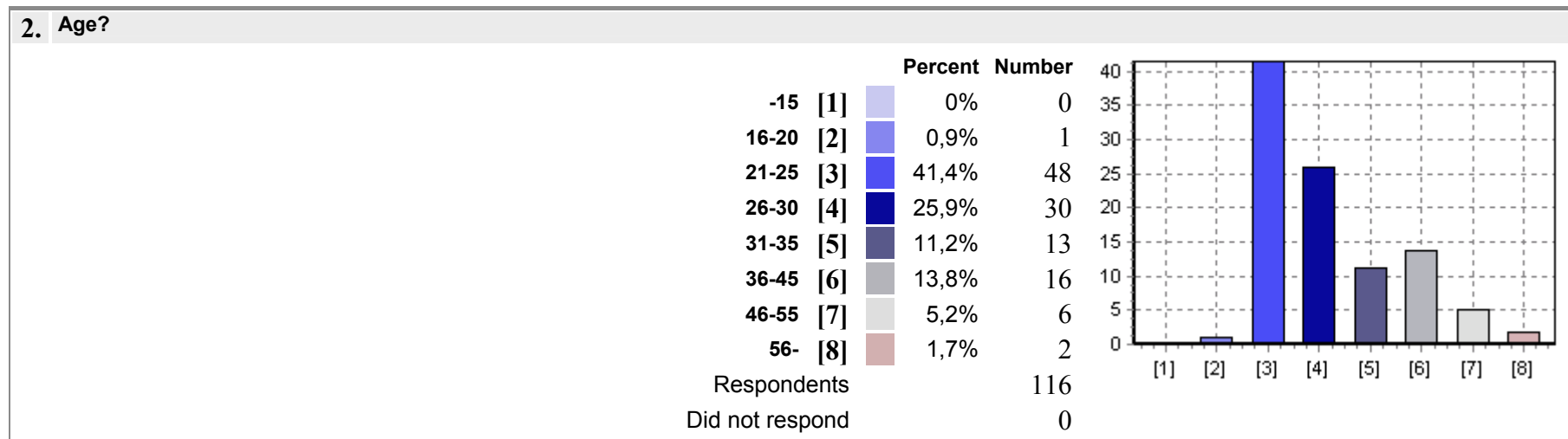
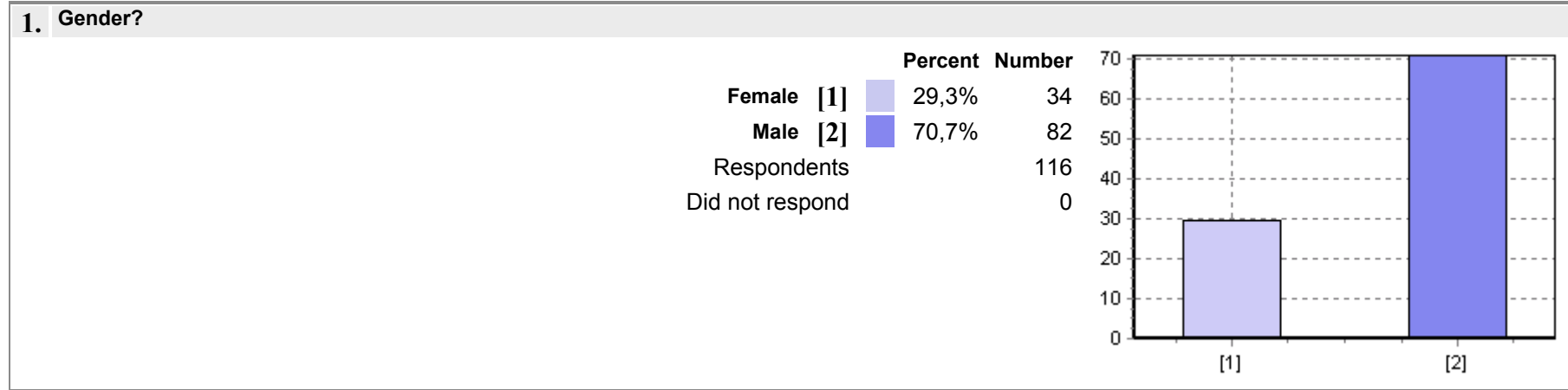
This survey is a part of our Master thesis *Adopting Mobile Internet? – Findings from a study on Mobile Internet services using a user centred perspective*. The thesis focuses on the phenomenon of Mobile Internet and its use.

To get a broader understanding of what users of today think of Mobile Internet we have conducted a survey. The main purpose with the survey was to find out users experience and attitudes of Mobile Internet today. A second purpose was to see differences in attitudes towards Mobile Internet between different types of user groups. Finally we were also interested in which Mobile Internet services the respondents used today and which services they were missing.

When we conducted the survey we used a web based tool to design to administrate the work. The tool was used to design and distribute the questionnaire, but also to gather and analyse the data collected. The web based tool was supplied by a research company, Easyresearch, which we got in contact with during our work. The questionnaire we distributed consisted of 18 questions and free comments at the end. The questionnaire was sent via e-mail to 150 respondents. Since we wished as many answered questionnaires as possible we selected respondents that are people that have some connection to the authors, either work, education or spare time related.

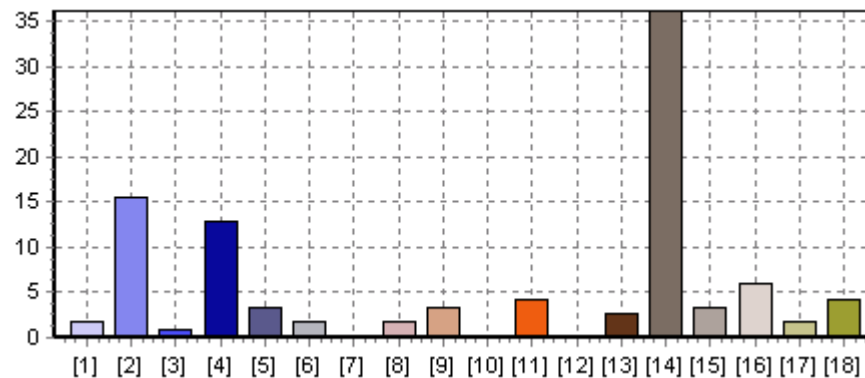
To see a distinction between different user groups we divided users into two groups, people that rated their general interest in new technologies (question 4) as High or Very high (Group A) and a group which rated their general interest in new technologies as Low or Very low (Group B).

02. Survey results



3. Occupation?

		Percent	Number
Accounting/finance	[1]	1,7%	2
Computer related	[2]	15,5%	18
Daycare/eldercare	[3]	0,9%	1
Education (i.e. teacher)	[4]	12,9%	15
Engineering	[5]	3,4%	4
Management	[6]	1,7%	2
Manufacturing/production	[7]	0%	0
Medical	[8]	1,7%	2
Research/development (i.e PhD Student)	[9]	3,4%	4
Retired	[10]	0%	0
Sales/marketing/advertising/customer service	[11]	4,3%	5
Self-employed/owner	[12]	0%	0
Student (economics)	[13]	2,6%	3
Student (computer science, technology)	[14]	36,2%	42
Student (social studies)	[15]	3,4%	4
Student (other)	[16]	6%	7
Unemployed/between jobs	[17]	1,7%	2
Other (please fill in below)	[18]	4,3%	5
Respondents			116
Did not respond			0

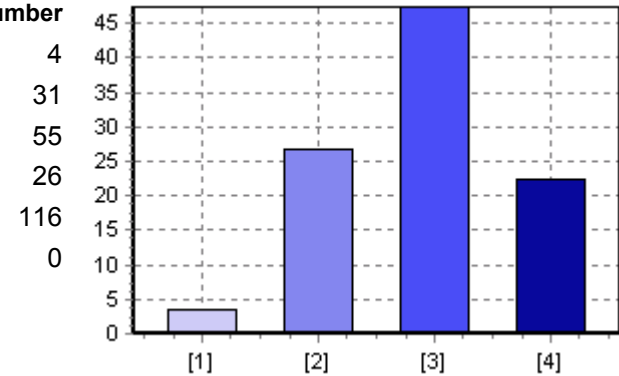


Open answers (7)

"Priest", "Project co-ordinator", "Energy technician",
"Student/ registered trauma care nurse", "Security
specialist", "Communication"
"Physiotherapist"

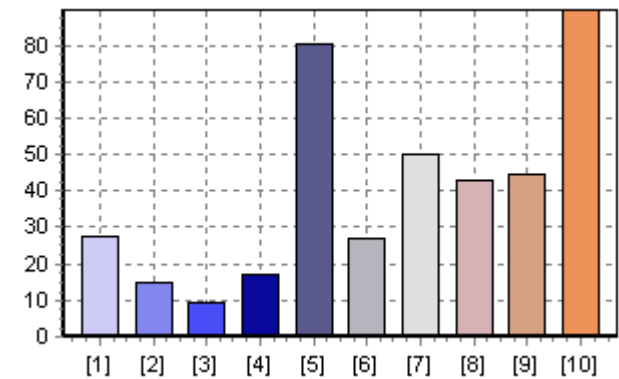
4. How would you rate your general interest in new technologies such as Mobile Internet and mobile communications?

	Percent	Number
Very low [1]	3,4%	4
Low [2]	26,7%	31
High [3]	47,4%	55
Very high [4]	22,4%	26
Respondents		116
Did not respond		0



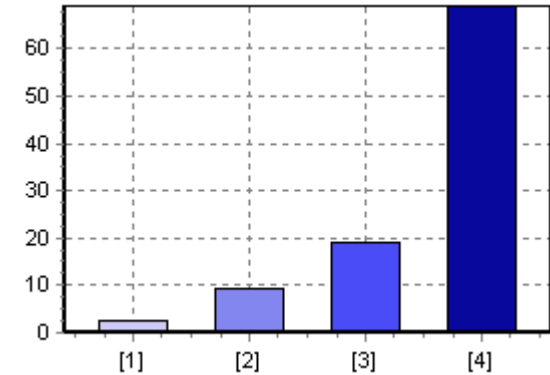
5. Which of the following technologies do you use/own?

	Percent	Number
A product using GPRS (i.e. a GPRS mobile phone) [1]	27,6%	32
A product using WLAN (i.e. a laptop computer equipped with WLAN-card) [2]	14,7%	17
Communicator (i.e. Nokia 9210, Sony Ericsson P800) [3]	9,5%	11
Handheld computer (i.e. Palm, Pocket PC) [4]	17,2%	20
Internet using ADSL or broadband [5]	80,2%	93
Internet using modem [6]	26,7%	31
Laptop computer [7]	50%	58
Mobile phone (WAP) [8]	43,1%	50
Mobile phone (non-WAP) [9]	44,8%	52
Personal computer [10]	89,7%	104
Respondents		116
Did not respond		0



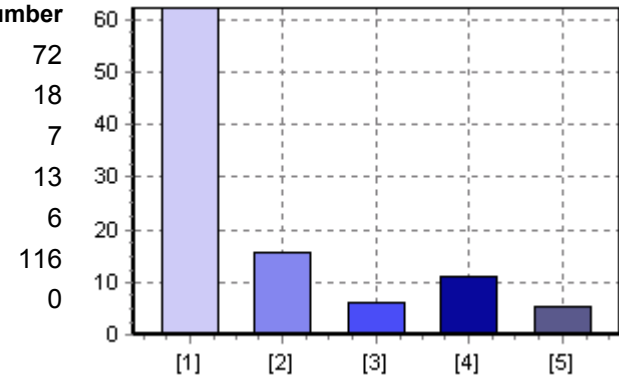
6. How many hours approximately do you spend online on the Internet per week?

	Percent	Number
Less than 1 h [1]	2,6%	3
1-5 h [2]	9,5%	11
6-10 h [3]	19%	22
More than 10 h [4]	69%	80
Respondents		116
Did not respond		0



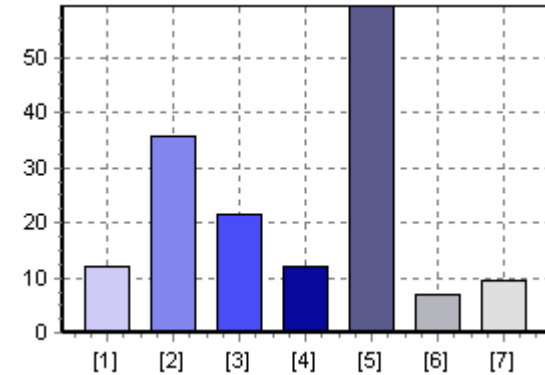
7. How often do you use Mobile Internet (i.e. e-mail or web browsing through a mobile device)?

	Percent	Number
I never use Mobile Internet [1]	62,1%	72
Less than 1 time per month [2]	15,5%	18
1-3 times per month [3]	6%	7
1-5 times per week [4]	11,2%	13
More than 5 times per week [5]	5,2%	6
Respondents		116
Did not respond		0



8. How do you access Mobile Internet?

		Percent	Number
AvantGo (offline browsing) [1]		11,9%	5
E-mail client [2]		35,7%	15
Opera 6.0 (i.e. Sony Ericsson P800) [3]		21,4%	9
Pocket Internet Explorer [4]		11,9%	5
WAP-browser [5]		59,5%	25
I do not know [6]		7,1%	3
Other (please fill in below) [7]		9,5%	4
Respondents			42
Did not respond			2
Question exposed to			44



Open answers (4)

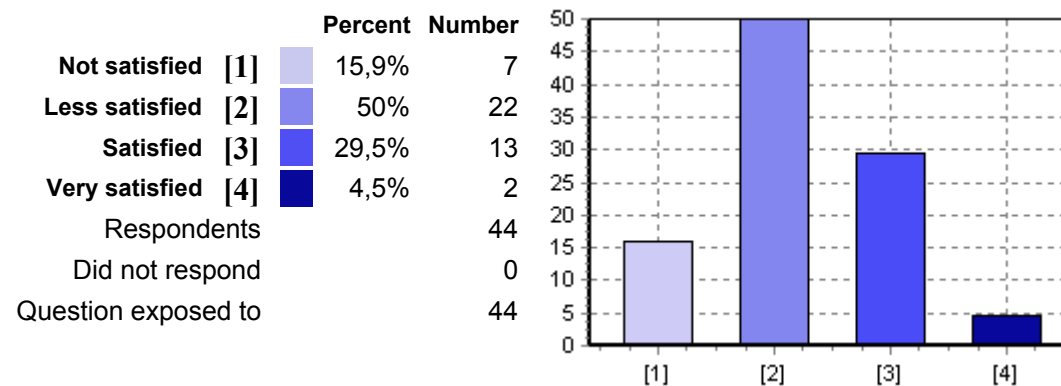
"Mobile PC and gsm-modem"

"GPRS ICQ client"

"WLAN Laptop with standard Internet Explorer"

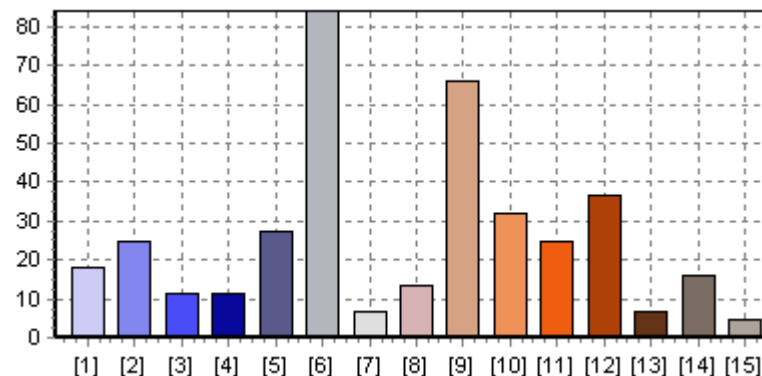
"Laptop connected to WLAN, I use all possible software"

9. How satisfied are you with the Mobile Internet services you use today?



10. What kind of Mobile Internet services do you use?

		Percent	Number
Access other IT systems (i.e. your company's IT system)	[1]	18,2%	8
Bank services	[2]	25%	11
Chat	[3]	11,4%	5
Communities	[4]	11,4%	5
Download games/logos/ring tones	[5]	27,3%	12
E-mail	[6]	84,1%	37
Fax	[7]	6,8%	3
File sharing	[8]	13,6%	6
General web browsing	[9]	65,9%	29
Instant messaging (i.e. ICQ)	[10]	31,8%	14
Music/video download	[11]	25%	11
News services	[12]	36,4%	16
Online games	[13]	6,8%	3
Shopping	[14]	15,9%	7
Other (please fill in below)	[15]	4,5%	2
Respondents			44
Did not respond			0
Question exposed to			44



Open answers (4)

"Timetables for local traffic"

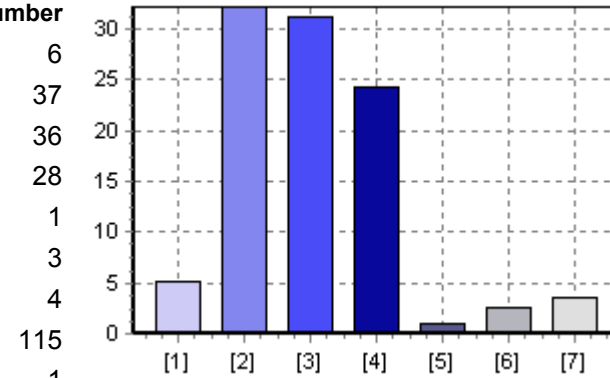
"System administration of other computers by using a SSH-client on my GPRS-connected laptop"

"Checking www.aftonbladet.se/snabb which is adapted for PDA, when I sit on the toilet. I download the page to my PC then copy it to my PDA using USB."

"However all is on a LAPTOP ... with WLAN ..."

11. What is your opinion of Mobile Internet today? (Choose an alternative that is closest to your opinion)

	Percent	Number
It is very good and useful [1]	5,2%	6
It has a great potential of being something really great [2]	32,2%	37
It is not very useful today, but it may be sometime [3]	31,3%	36
Nice for those who find it useful [4]	24,3%	28
Why should I have Internet in my mobile device? [5]	0,9%	1
Something completely unneeded [6]	2,6%	3
Other (please fill in below) [7]	3,5%	4
Respondents		115
Did not respond		1



Open answers (4)

"a. Industry believes too much in new strategies to create turnover, mobile internet such as WAP has to be much cheaper than it is today. The consumers are very sensitive to prices.

b. Standards change often, so customers are confused about what to buy; they might even get frustrated. On the other hand ordinary people can not judge about technical details since their expertise is too low."

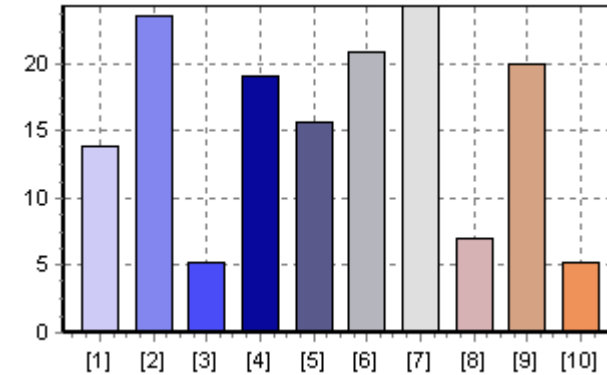
"The way it works today is not very good, WAP is just not the right way to go. I am waiting for IPv6 access from mobile devices. I want full access to the internet."

"I have not had the opportunity to use mobile internet as much as I wanted to have an opinion about it"

"It depend on the products.. I don't like mobile phones yet because they have to little power.."

12. Which of the following alternatives do you think is/are the best description of Mobile Internet today?

		Percent	Number
Bad attempt to make a mobile copy of Internet	[1]	13,9%	16
Internet "packed" in a mobile device	[2]	23,5%	27
Like Internet	[3]	5,2%	6
Like Internet a couple of years ago	[4]	19,1%	22
Like Internet but on a smaller screen	[5]	15,7%	18
Links to information	[6]	20,9%	24
Something in a mobile device that costs money	[7]	24,3%	28
Something where you can download ring tones, logos and games	[8]	7%	8
I have no idea since I never have experienced Mobile Internet	[9]	20%	23
Other (please fill in below)	[10]	5,2%	6
Respondents			115
Did not respond			1

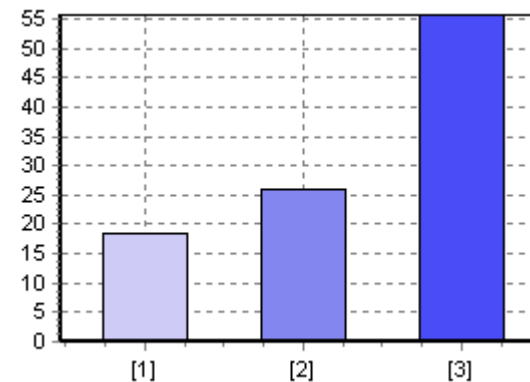


Open answers (6)

"Very useful regarding information but slow."
 "It could be better if information sites for mobile internet users made their websites really for mobile users. Just see what happens when you enter for example a site with pocket pc and the site thinks it's an old model of IE. ????"
 "As it is right now its not worth mentioning (its mostly for those that are extreme geeks with lots of money), but as more and more things get connected to internet it might one day become good."
 "Somewhat useful, but not yet usable."
 "Slow and often very poor interface, thus hard to use for people not experienced with it."
 "And it will become more."

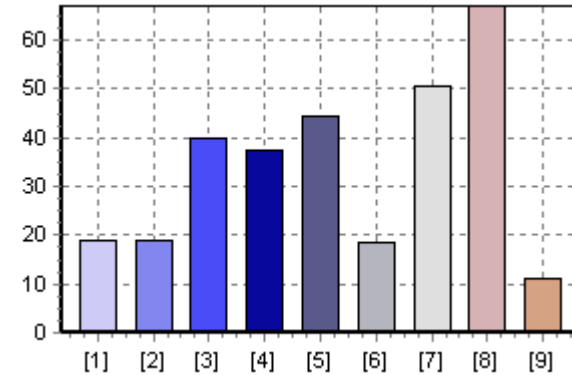
13. Do you/Would you use Mobile Internet services primarily for business or for private purposes?

	Percent	Number
Business [1]	18,3%	21
Private [2]	26,1%	30
Both [3]	55,7%	64
Respondents		115
Did not respond		1



14. Where/when do you/would you primarily use Mobile Internet services?

	Percent	Number
At cafes/restaurants [1]	19,1%	22
At home [2]	19,1%	22
At public places [3]	40%	46
At the airport [4]	37,4%	43
At train/bus stations [5]	44,3%	51
In the office [6]	18,3%	21
On the train/bus/taxi [7]	50,4%	58
When travelling (i.e. abroad) [8]	67%	77
Other (please fill in below) [9]	11,3%	13
Respondents		115
Did not respond		1

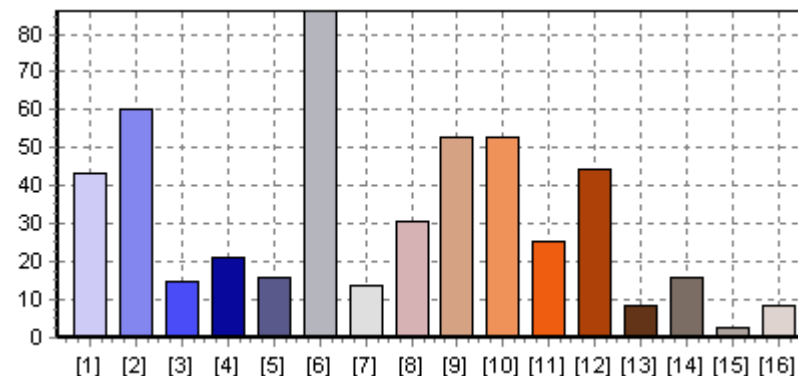


Open answers (15)

- "When I'm mobile, i.e. NOT having access to a stationary PC"
- "Read teletext on the train sometimes, using WAP."
- "Ticket booking"
- "When travelling, domestic"
- "In my car."
- "Whenever I need information or need to communicate"
- "In hotel rooms when travelling within Sweden"
- "In the car and in the restroom"
- "When I am on the toilet"
- "At work practice locations"
- "To check email and use the Internet anywhere."
- "Everywhere must be the primary place for usage. That is the point too right?"
- "When needed, not depending on place, but situation."
- "It depends on the device.... "
- "In the queue at the supermarket when I wait for someone or something."

15. What kind of Mobile Internet services would you like to have access to?

		Percent	Number
Access other IT systems (i.e. your company's IT system)	[1]	43,5%	50
Bank services	[2]	60%	69
Chat	[3]	14,8%	17
Communities	[4]	20,9%	24
Download games/logos/ring tones	[5]	15,7%	18
E-mail	[6]	86,1%	99
Fax	[7]	13,9%	16
File sharing	[8]	30,4%	35
General web browsing	[9]	53%	61
Instant messaging (i.e. ICQ)	[10]	53%	61
Music/video download	[11]	25,2%	29
News services	[12]	44,3%	51
Online games	[13]	8,7%	10
Shopping	[14]	15,7%	18
I am not interested in any Mobile Internet services	[15]	2,6%	3
Other (please fill in below)	[16]	8,7%	10
Respondents			115
Did not respond			1

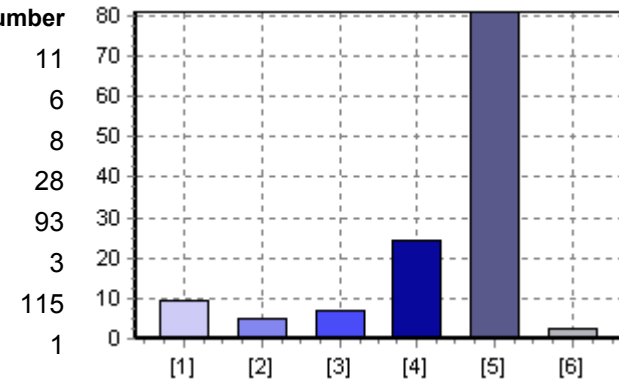


Open answers (9)

"Weather info, TV charts, Yellow pages, maps etc."
 "Timetables (i.e. train), positioning and maps"
 "GPS system into my pocket device connected to a web service with information for ex. restaurants etc."
 "I want access to internet, and not a limited edition of it."
 "Controlling other machines through the internet via a mobile phone (sort of a remote with very long range)",
 "Everything you can do on the Internet"
 "Travel information and health care services"

16. What do you think are the main advantages of Mobile Internet in relation to Internet, if any?

	Percent	Number
Easier to use [1]	9,6%	11
Identity based services (i.e. more personalised services) [2]	5,2%	6
I do not think Mobile Internet has any advantages in relation to Internet [3]	7%	8
Position based services [4]	24,3%	28
Possibility to always access Internet independent of location and context [5]	80,9%	93
Other (please fill in below) [6]	2,6%	3
Respondents		115
Did not respond		1



Open answers (3)

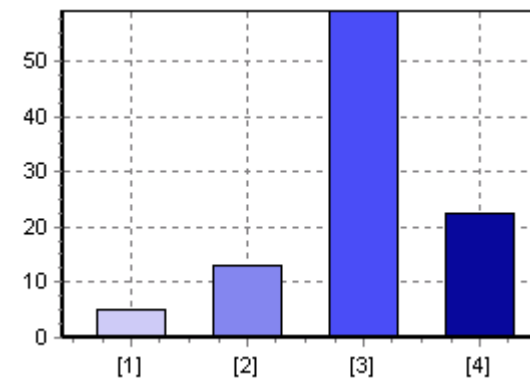
"But disadvantages are the tiny user interface. You cannot see anything on it"

"That I do not have to start up the computer every time I want to take a look at something, starting up is to much overhead... and of course I do not have to carry around it either..."

"Not the ordinary Internet in a 2-inch screen, instead beyond the office metaphor, things that one can do when you are not at the office, on the bus for example. Access to news/weather, answer to when next bus/train leaves, answer if it is enough money on my credit card, if not the possibility to move money between accounts."

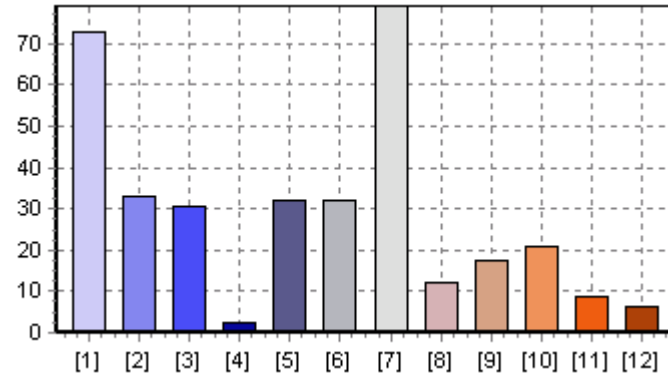
17. Do you think that you will use Mobile Internet more frequently within two-three years?

		Percent	Number
Not likely	[1]	5,2%	6
Less Likely	[2]	13%	15
Likely	[3]	59,1%	68
Very likely	[4]	22,6%	26
Respondents			115
Did not respond			1



18. What would you say are the most important aspects that could make Mobile Internet usage increase? (Please choose 3 alternatives)

		Percent	Number
Better connection speed	[1]	73%	84
Better input possibilities on mobile devices	[2]	33%	38
Better navigation	[3]	30,4%	35
Easier to make your own mobile home pages	[4]	2,6%	3
Easier to use	[5]	32,2%	37
Larger screens on mobile devices	[6]	32,2%	37
Lower costs	[7]	79,1%	91
More access to other IT systems	[8]	12,2%	14
More localisation based mobile services	[9]	17,4%	20
More mobile services	[10]	20,9%	24
More personalised services	[11]	8,7%	10
Other (please fill in below)	[12]	6,1%	7
Respondents			115
Did not respond			1



Open answers (8)

- "Be able to use mobile Internet more frequent to a rather small cost (private persons)"
- "Larger screen with small device with extra screen??? Why not."
- "Controlling everyday things as heaters in a house and such things (sort of like a remote control)"
- "More services targeted for PDA screen size."
- "Cheaper"
- "Better presentation, overview of the page content."
- "More powerful machines"
- "New services beyond the PC and the office metaphor."

19. General comments

Respondents	14
Did not respond	102

Open answers (5)

"I think that there is a future in use of mobile Internet, because it gives you the possibility of being mobile. I believe though that the interface of the mobile phones is very important and that using mobile Internet demands a smart phone , like for example P800 to be useful considering size of screen and memory. To be a success it is necessary to make a simple and well planned design easy to navigate instead och trying to make a copy of todays Internet. Simplicity is a keyword."

" I´m waiting for new services."

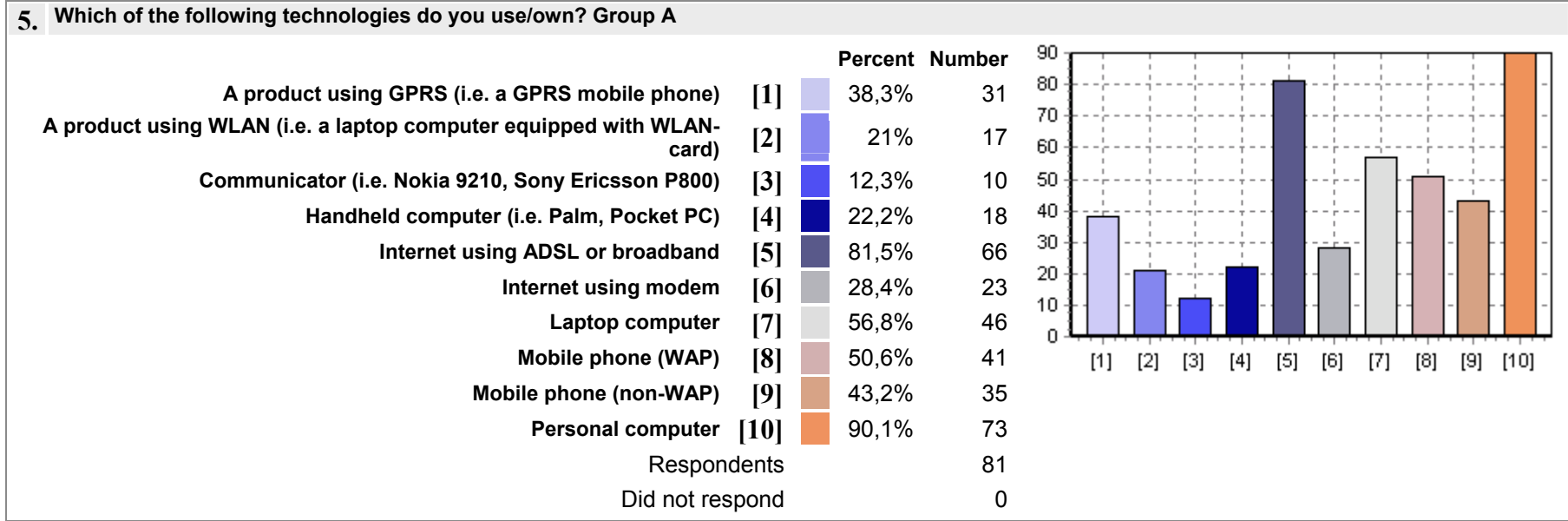
"It is cumbersome to get all settings in the phone right before you can WAP the first time for example when the phone is new or when you change phone company. You often need a computer connected to the Internet and visit the companies homepages to see or download the new settings to the phone. I believe and know that there are people that give up before they even have begun using their WAP possibilities."

"Mobile Internet needs more service (things that can be done) before its actually worth using."

"I think UI designers and software engineers in general should be aware of the fact that software for mobile devices cannot be designed as traditional software for laptop applications. System developers ought to think of design from a new perspective where the aspects of usefulness and usability are more crucial then ever. Its a great change for users as well. Discovering Mobile Internet might be quite a painful process and designers should attempt to eliminate users fear and frustration. I definitely think Mobile Internet has a great potential, but my own experience of using a PDA is that its rather awkward to use input devices, in particular the virtual keyboard. Processing on a mobile device ought to be faster than the alternatives to become a success, otherwise users will find other ways to perform their task. A problem when designing though is the small screen. My experience of designing a GUI for pocket pc is that you want to reduce the number of keystrokes, facilitate input mechanisms, follow the workflow of manual/current/logic processing etc. Its not easy to make it all fit together, but a real challenge."

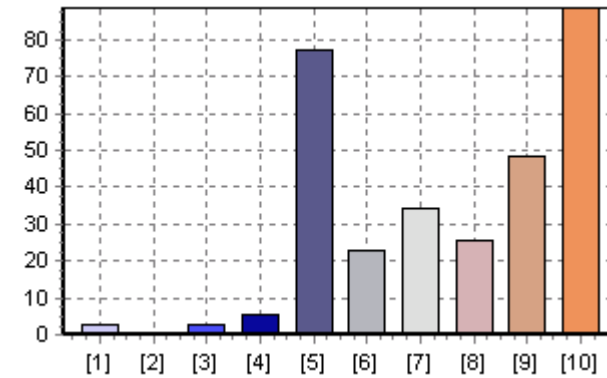
"All of the answers is with PDA or WAP enabled mobile phone, what you can have in your pocket. When it comes to laptop the answers will be more like a dragable office, which is a total different thing."

03. Survey results – different user groups



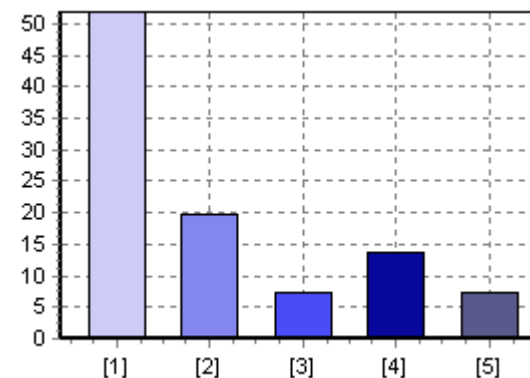
5. Which of the following technologies do you use/own? Group B

		Percent	Number
A product using GPRS (i.e. a GPRS mobile phone)	[1]	2,9%	1
A product using WLAN (i.e. a laptop computer equipped with WLAN-card)	[2]	0%	0
Communicator (i.e. Nokia 9210, Sony Ericsson P800)	[3]	2,9%	1
Handheld computer (i.e. Palm, Pocket PC)	[4]	5,7%	2
Internet using ADSL or broadband	[5]	77,1%	27
Internet using modem	[6]	22,9%	8
Laptop computer	[7]	34,3%	12
Mobile phone (WAP)	[8]	25,7%	9
Mobile phone (non-WAP)	[9]	48,6%	17
Personal computer	[10]	88,6%	31
Respondents			35
Did not respond			0



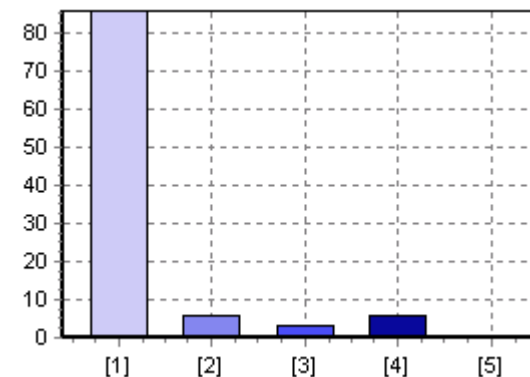
7. How often do you use mobile Internet (i.e. e-mail or web browsing through a mobile device)? Group A

		Percent	Antal
I never use mobile Internet	[1]	51,9%	42
Less than 1 time per month	[2]	19,8%	16
1-3 times per month	[3]	7,4%	6
1-5 times per week	[4]	13,6%	11
More than 5 times per week	[5]	7,4%	6
Respondents			81
Did not respond			0



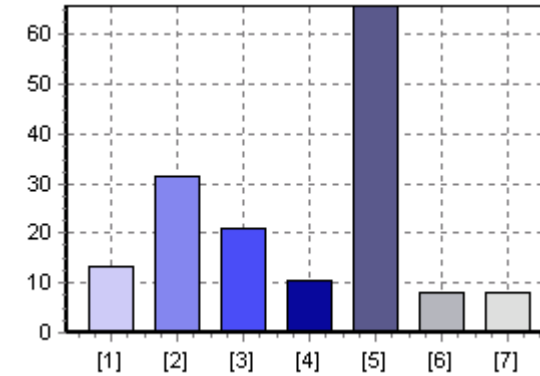
7. How often do you use mobile Internet (i.e. e-mail or web browsing through a mobile device)? Group B

		Percent	Antal
I never use mobile Internet	[1]	85,7%	30
Less than 1 time per month	[2]	5,7%	2
1-3 times per month	[3]	2,9%	1
1-5 times per week	[4]	5,7%	2
More than 5 times per week	[5]	0%	0
Respondents			35
Did not respond			0



8. How do you access Mobile Internet? Group A

		Percent	Number
AvantGo (offline browsing) [1]		13,2%	5
E-mail client [2]		31,6%	12
Opera 6.0 (i.e. Sony Ericsson P800) [3]		21,1%	8
Pocket Internet Explorer [4]		10,5%	4
WAP-browser [5]		65,8%	25
I do not know [6]		7,9%	3
Other (please fill in below) [7]		7,9%	3
Respondents			38
Did not respond			1
Question exposed to			39










Open answers (3)

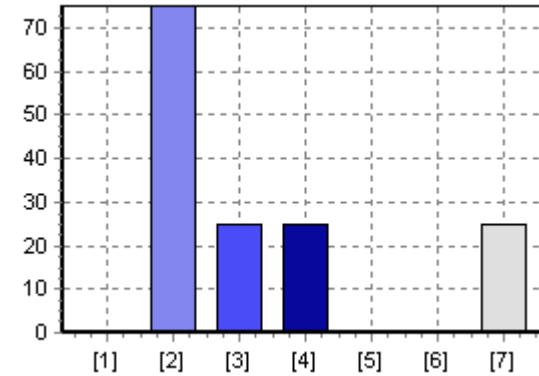
"Mobile PC and gsm-modem"

"WLAN Laptop with standard Internet Explorer"

"Laptop connected to WLAN, I use all possible software"

8. How do you access Mobile Internet? Group B

		Percent	Number
AvantGo (offline browsing) [1]		0%	0
E-mail client [2]		75%	3
Opera 6.0 (i.e. Sony Ericsson P800) [3]		25%	1
Pocket Internet Explorer [4]		25%	1
WAP-browser [5]		0%	0
I do not know [6]		0%	0
Other (please fill in below) [7]		25%	1
Respondents			4
Did not respond			1
Question exposed to			5

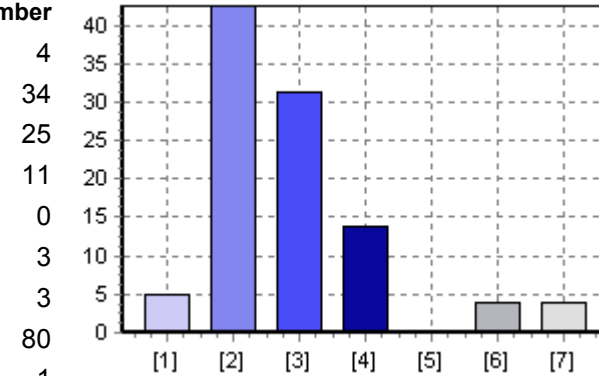


Open answers (1)

"GPRS ICQ client"

11. What is your opinion of Mobile Internet today? (Choose an alternative that is closest to your opinion) Group A

		Percent	Number
It is very good and useful	[1]	5%	4
It has a great potential of being something really great	[2]	42,5%	34
It is not very useful today, but it may be sometime	[3]	31,2%	25
Nice for those who find it useful	[4]	13,8%	11
Why should I have Internet in my mobile device?	[5]	0%	0
Something completely unneeded	[6]	3,8%	3
Other (please fill in below)	[7]	3,8%	3
Respondents			80
Did not respond			1



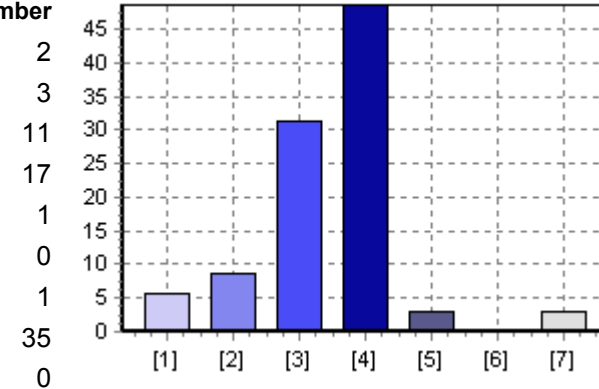
Open answers (3)

"The way it works today is not very good, WAP is just not the right way to go. I am waiting for IPv6 access from mobile devices. I want full access to the internet."
 "I have not had the opportunity to use mobile internet as much as I wanted to have an opinion about it"
 "It depend on the products.. I don't like mobile phones yet because they have to little power.."

11. What is your opinion of Mobile Internet today? (Choose an alternative that is closest to your opinion) Group B

		Percent	Number
It is very good and useful	[1]	5,7%	2
It has a great potential of being something really great	[2]	8,6%	3
It is not very useful today, but it may be sometime	[3]	31,4%	11
Nice for those who find it useful	[4]	48,6%	17
Why should I have Internet in my mobile device?	[5]	2,9%	1
Something completely unneeded	[6]	0%	0
Other (please fill in below)	[7]	2,9%	1
			35
			0

Respondents
Did not respond



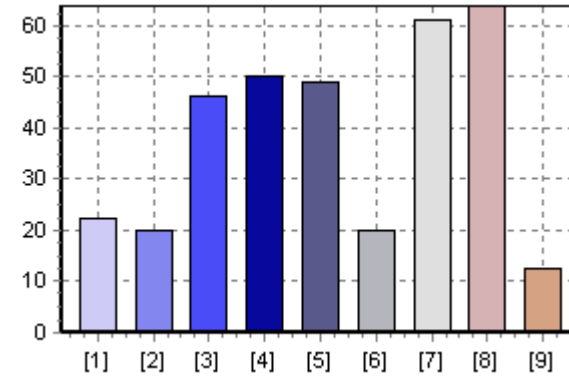
Open answers (1)

"a. Industry believes too much in new strategies to create turnover, mobile internet such as WAP has to be much cheaper than it is today. The consumers are very sensitive to prices.

b. Standards change often, so customers are confused about what to buy; they might even get frustrated. On the other hand ordinary people can not judge about technical details since their expertise is too low."

14. Where/when do you/would you primarily use Mobile Internet services? Group A

	Percent	Number
At cafes/restaurants [1]	22,5%	18
At home [2]	20%	16
At public places [3]	46,2%	37
At the airport [4]	50%	40
At train/bus stations [5]	48,8%	39
In the office [6]	20%	16
On the train/bus/taxi [7]	61,2%	49
When travelling (i.e. abroad) [8]	63,8%	51
Other (please fill in below) [9]	12,5%	10
Respondents		80
Did not respond		1

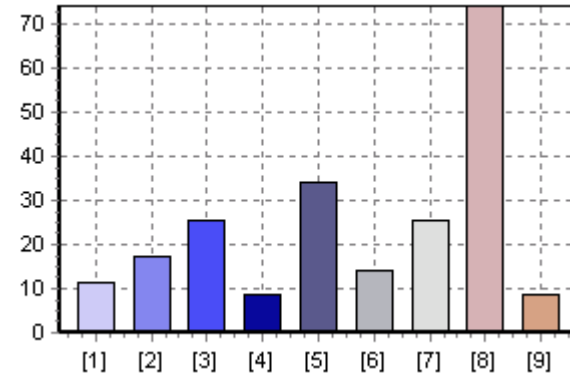


Open answers (10)

- "When I'm mobile, i.e. NOT having access to a stationary PC"
- "Read teletext on the train sometimes, using WAP."
- "When travelling, domestic"
- "In my car."
- "Whenever I need information or need to communicate"
- "In hotel rooms when travelling within Sweden"
- "When I am on the toilet"
- "To check email and use the Internet anywhere."
- "Everywhere must be the primary place for usage. That is the point too right?"
- "When needed, not depending on place, but situation."
- "It depends on the device.... "
- "In the queue at the supermarket when I wait for someone or something."

14. Where/when do you/would you primarily use Mobile Internet services? Group B

		Percent	Number
At cafes/restaurants	[1]	11,4%	4
At home	[2]	17,1%	6
At public places	[3]	25,7%	9
At the airport	[4]	8,6%	3
At train/bus stations	[5]	34,3%	12
In the office	[6]	14,3%	5
On the train/bus/taxi	[7]	25,7%	9
When travelling (i.e. abroad)	[8]	74,3%	26
Other (please fill in below)	[9]	8,6%	3
Respondents			35
Did not respond			0

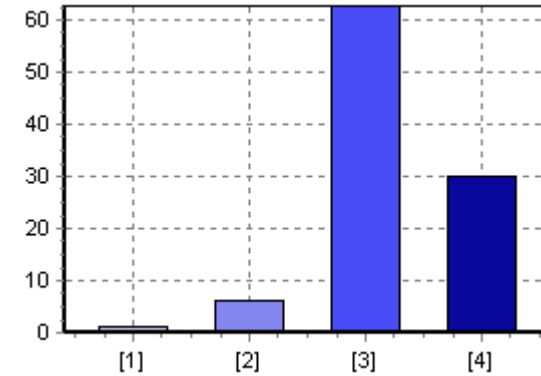


Open answers (3)

"Ticket booking"
"In the car and in the restroom"
"At work practice locations"

17. Do you think that you will use Mobile Internet more frequently within two-three years? Group A

		Percent	Number
Not likely	[1]	1,2%	1
Less Likely	[2]	6,2%	5
Likely	[3]	62,5%	50
Very likely	[4]	30%	24
Respondents			80
Did not respond			1



17. Do you think that you will use Mobile Internet more frequently within two-three years? Group B

		Percent	Number
Not likely	[1]	14,3%	5
Less Likely	[2]	28,6%	10
Likely	[3]	51,4%	18
Very likely	[4]	5,7%	2
Respondents			35
Did not respond			0

