



THE
STRATEGIC
COUNSEL

25

TORONTO | OTTAWA | CALGARY | HOUSTON

www.thestrategiccounsel.com

EXPERIENCE • PASSION • CREATIVITY
CUSTOM SOLUTIONS FOR COMPLEX ISSUES



A REPORT TO
CIRA

ATTITUDES OF CANADIANS ON KEY INTERNET ISSUES

March 2021

CONTENTS

1	ABOUT THE RESEARCH	3
2	MEDIA LITERACY AND FAKE NEWS	5
3	HATE SPEECH AND ILLEGAL ACTIVITIES/CONTENT	14
4	INTERNET SPEED AND MUNICIPAL NETWORKS	23
5	ACCESSING GOVERNMENT SERVICES	27
6	PRIVACY AND SECURITY OF PERSONAL INFORMATION/DATA	29
7	SMART HOME DEVICES AND IoT	36
8	CYBERATTACKS AND CYBERSECURITY	43
9	IMPROVING ACCESS TO LOCAL NEWS AND CREATIVE INDUSTRIES	47
10	LOCATION OF INTERNET INFRASTRUCTURE AND CLOUD SERVICES	52
11	AI AND FACIAL RECOGNITION	60
12	SAMPLE DEMOGRAPHICS	63

1

ABOUT THE RESEARCH

Project Background and Methodology

The Strategic Counsel is pleased to provide CIRA with the following report of findings from a survey of Canadians on issues relating to media literacy, internet privacy, cybersecurity and governance.

- As one of the principals in the annual Canadian Internet Governance Forum (CIGF), CIRA required research to examine Canadians' views on key issues facing the internet community today.
- The research will support CIRA's continued position as an internet innovator and global thought leader.

An online panel methodology was used to survey a total of **n=1,254** Canadian internet users (18+) between the dates of February 19 – March 1, 2021.

The total sample is proportionate to population by gender, age and region.


Where possible, the findings are compared to the same or similar questions asked in previous waves of CIRA's Internet Trends and CIGF research (2016-2020).

2

MEDIA LITERACY AND FAKE NEWS

FREQUENCY OF ENCOUNTERING FAKE NEWS STORIES

Over three-quarters say they come across fake news stories at least sometimes, and 21% say they come across fake news often or all the time. There is no change from 2019 – 2020.

	TOTAL		TRACKING		
	2021		Spring 2018	2019	2020
	1,254		1,203	1,269	1,254
	%		%	%	%
TOTAL OFTEN/ALL THE TIME/SOMETIMES	78		78	75	78
Often/all the time	21		27	20	20
Sometimes	57		51	55	57
Hardly ever	13		10	15	13
Never	2		2	3	2
TOTAL HARDLY EVER/NEVER	16		13	18	15
Don't know	6		10	7	7








78% 18-34
77% 35-49
82% 50-64
74% 65+

Q2. 'Fake news' refers to news stories or items that are completely fabricated or made up, or that grossly misrepresent actual events. How often do you come across news stories online that you think are almost completely made up?

Base: Total sample

FREQUENCY OF ENCOUNTERING FAKE NEWS DURING THE 2019 CANADIAN FEDERAL ELECTION

Three-quarters indicate that they definitely or probably came across fake news stories about U.S. politics or politicians in the lead up to the U.S election in November, 2020 (compared to 54% who said the same about the Canadian federal election in 2019).

	TOTAL	2020
	2021	2020
	1,254	1,254
	%	%
TOTAL YES	 75	54
Yes, definitely	 33	13
Yes, probably	 42	41
No, probably not	 10	22
No, definitely not	 3	4
TOTAL NO	 12	26
Don't know	 13	20


Q3. (NEW IN 2020) As far as you know, did you come across any fake news stories about Canadian politics or politicians in the lead up to, or during, the Canadian federal election held in October, 2019?

Q3. (WORDING IN 2021) As far as you know, did you come across any fake news stories about US politics or politicians in the lead up to, or during, the American election held in November, 2020?

Base: Total sample

LEVEL OF CONCERN ABOUT THE SPREAD OF FAKE NEWS IN CANADA GENERALLY

Just under three-quarters are at least somewhat concerned about the spread of fake news in Canada generally. Levels of concern are unchanged from 2020.

	TOTAL		TRACKING		
	2021		Spring 2018	2019	2020
	1,254		1,203	1,269	1,254
	%		%	%	%
TOTAL CONCERNED	72		74	75	73
Very concerned	30		34	31	29
Somewhat concerned	42		40	43	44
Neutral	13		n/a	13	14
Not very concerned	9		19	8	8
Not concerned at all	3		4	3	3
TOTAL NOT CONCERNED	12		23	11	11
Don't know	3		4	1	2








69% 18-34
68% 35-49
77% 50-64
79% 65+

Q4. How concerned are you, if at all, about the spread of fake news in Canada generally? (TRACKING: SPRING 2018. How concerned are you about the spread of fake news stories online?)

Base: Total sample

IS THE SPREAD OF FAKE NEWS ON SOCIAL MEDIA SITES A PROBLEM?

Fully 88% believe that the spread of fake news of social media sites/platforms is a problem (unchanged from 2020).

	TOTAL		TRACKING	
	2021		2019	2020
	1,254		1,269	1,254
	%		%	%
TOTAL YES	 88		87	88
Yes, definitely	 55		53	53
Yes, somewhat	 33		34	35
No, not really	 7		8	7
No, definitely not	 1		1	1
TOTAL NO	 8		9	8
Don't know	 4		4	4


Previous battery phrasing: “Yes, definitely”, “Yes, probably”, “No, probably not”, “No, definitely not”, “Don’t know”

Q5. In your view, is the spread of fake news on social media sites/platforms (e.g., Facebook, Twitter, etc.) a problem?

Base: Total sample

CONFIDENCE IN OWN ABILITY TO RECOGNIZE FAKE NEWS STORIES ONLINE

Eight-in-ten (80%) are confident in their own ability to recognize fake news stories online, which is up from 73% in 2020 but consistent with 2019.









	TOTAL		TRACKING		
	2021		Spring 2018	2019	2020
	1,254		1,203	1,269	1,254
	%		%	%	%
TOTAL CONFIDENT	80 →	 82% 18-34 78% 35-49 80% 50-64 79% 65+	74	80	73
Very confident	22		20	26	17
Somewhat confident	58		54	54	56
Not very confident	14		17	16	20
Not confident at all	2		3	3	3
TOTAL NOT CONFIDENT	16		20	18	23
Don't know	5		6	2	4

Q6. How confident are you in your own ability to recognize news stories online that are made up?

Base: Total sample

EVER BELIEVED WHAT YOU LATER FOUND OUT TO BE A FAKE NEWS ITEM?

More than one-half (56%) say they have been taken in by a fake news item (unchanged from 2020).

	TOTAL		TRACKING	
	2021		2019	2020
	1,254		1,269	1,254
	%		%	%
TOTAL YES	 56	 53% 18-34 57% 35-49 59% 50-64 58% 65+	57	58
Yes, definitely	 12		11	13
Yes, probably	 44		46	45
No, probably not	 24		24	23
No, definitely not	 10		10	10
TOTAL NO	 35		34	32
Don't know	 9		9	10

Q7. Have you ever believed what you later found out to be a fake news item?

Base: Total sample

AMOUNT OF RESPONSIBILITY SOCIAL MEDIA COMPANIES SHOULD HAVE IN MONITORING AND REMOVING FAKE NEWS

Just under 9-in-10 (87%) believe that social media companies should have at least some responsibility in monitoring and removing fake news from their websites/platforms. One-half (49%) believe that social media companies should have ‘complete’ responsibility (unchanged from 2020).

	TOTAL		TRACKING	
	2021		2019	2020
	1,254		1,269	1,254
	%		%	%
TOTAL COMPLETE/SOME	87		91	88
Complete	49	82% 18-34 87% 35-49 92% 50-64 92% 65+	49	49
Some	38		43	39
A little/not much	5		5	7
None at all	4		2	3
TOTAL A LITTLE/NONE AT ALL	9		7	9
Don't know	4		2	2

Q8. How much responsibility, if any, should social media companies have in monitoring and removing fake news from their websites/platforms?

Base: Total sample

SHOULD THE FEDERAL GOVERNMENT ATTEMPT TO CONTROL THE SPREAD OF FAKE NEWS?

About three-quarters (77%) believe the federal government should attempt to control the spread of fake news by imposing fines or other sanctions on social media companies that do not act to remove it from their platforms. More than 4-in-10 (42%) ‘definitely’ believe it should.

	TOTAL	TRACKING	
	2021	2019	2020
	1,254	1,269	1,254
	%	%	%
TOTAL YES	77	79	80
Yes, definitely	42	38	47
Yes, probably	35	41	33
No, probably not	10	12	9
No, definitely not	5	5	4
TOTAL NO	16	16	14
Don't know	8	5	7

	<p>69% 18-34 78% 35-49 80% 50-64 85% 65+</p>
--	--

Q9. In your view, should the Canadian federal government attempt to control the spread of fake news by imposing fines or other sanctions on social media companies that do not act to remove fake news from their websites/platforms?

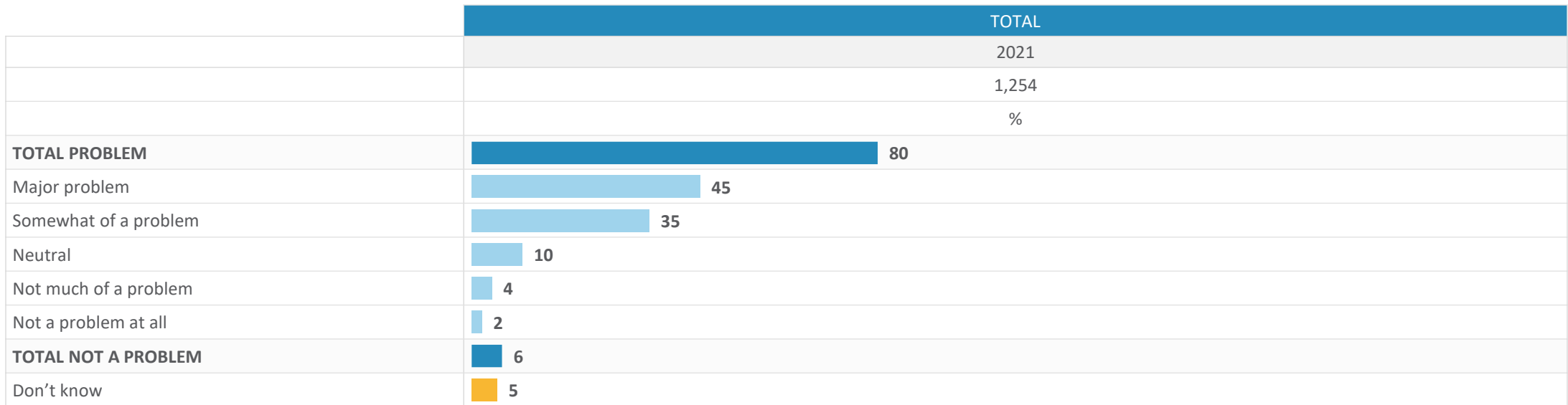
Base: Total sample

3

HATE SPEECH AND ILLEGAL ACTIVITIES/CONTENT

EXTENT TO WHICH HATE SPEECH IS A PROBLEM ON SOCIAL MEDIA PLATFORMS

Eight-in-ten (80%) believe that hate speech is a problem on social media platforms; 45% believe it is a ‘major’ problem.

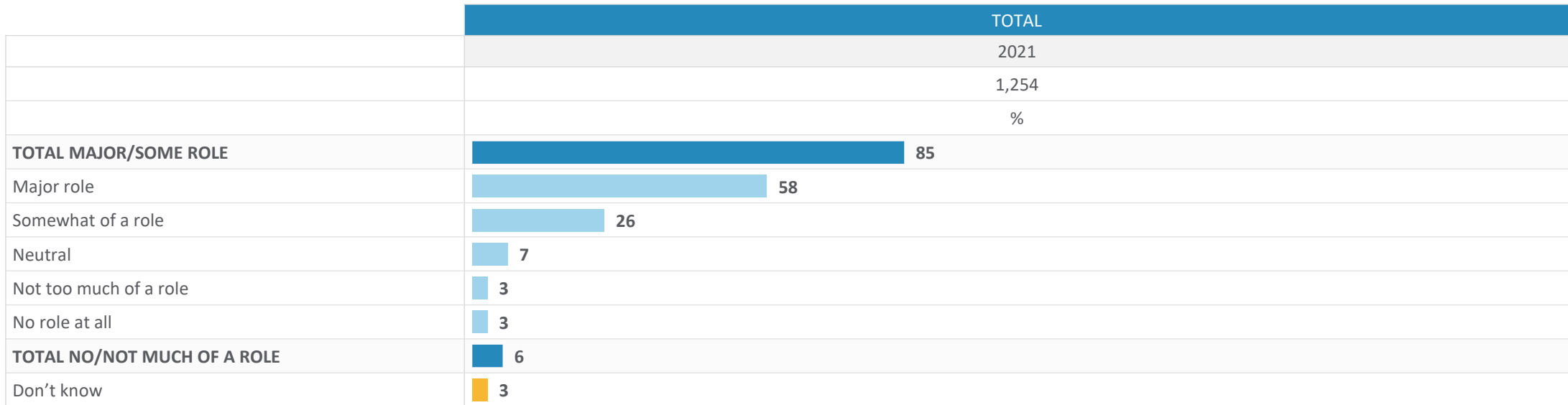


Q2021-1. Social media platforms (e.g., Facebook, Twitter, YouTube, etc.) allow users to generate and share content online. Some of the content that appears on social media platforms can be considered ‘hate speech’, that is, statements that willfully promote hatred against an identifiable group. In your view, how much of a problem is hate speech on social media platforms today?

Base: Total sample

ROLE SOCIAL MEDIA PLATFORMS SHOULD PLAY IN REMOVING ILLEGAL CONTENT

Fully 85% believe that social media platforms should be expected to play a role in removing illegal content; more than half (58%) believe they should play a ‘major’ role.

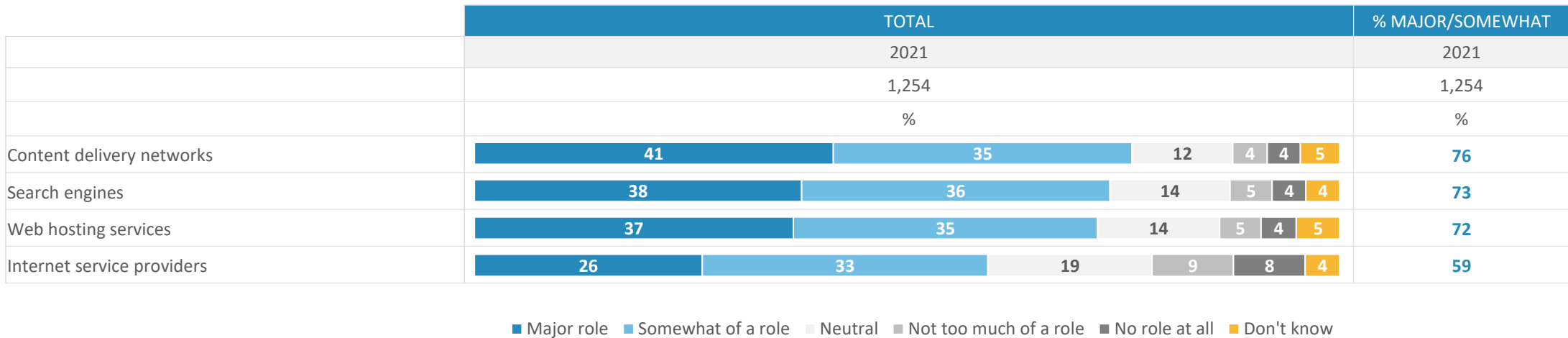


Q2021-2. How much of a role, if any, should social media platforms be expected to play in removing illegal content, including hate speech, that is generated and shared by people using their platforms?

Base: Total sample

ROLE OTHER SERVICES SHOULD PLAY IN REMOVING ILLEGAL CONTENT

Most people expect all kinds of services to play a role in removing illegal content. ISPs are less likely than others to be expected to play a role.

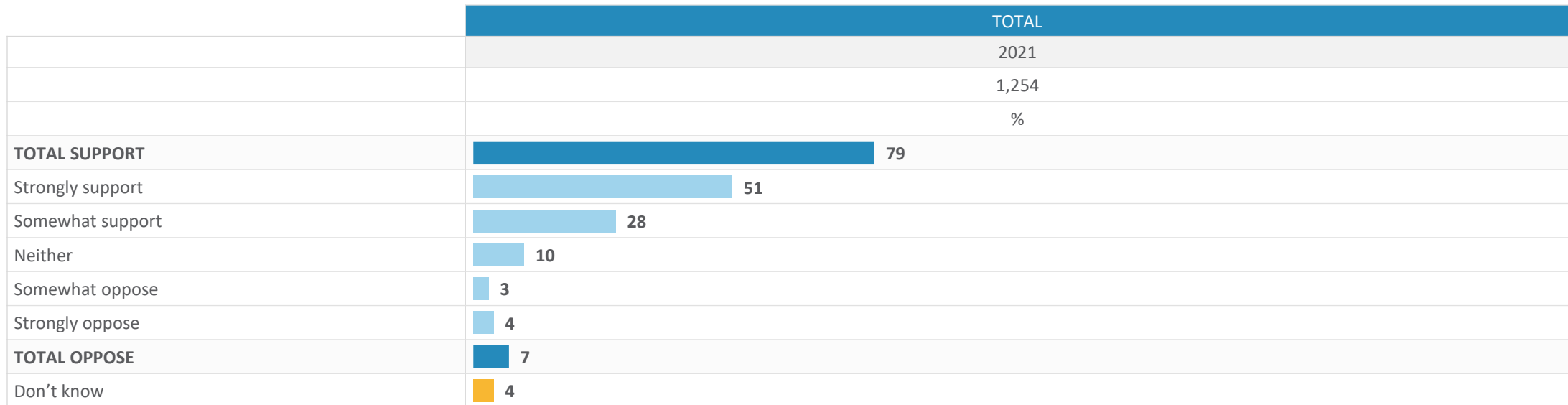


Q2021-3. How much of a role, if any, should the following other kinds of services that help people to share content online be expected to play in removing illegal content, including hate speech?

Base: Total sample

LEVEL OF SUPPORT FOR NEW LAW REQUIRING SOCIAL MEDIA PLATFORMS TO REMOVE ILLEGAL CONTENT

There is broad support for a new law requiring social media platforms to remove illegal content within 24 hours of it being identified.

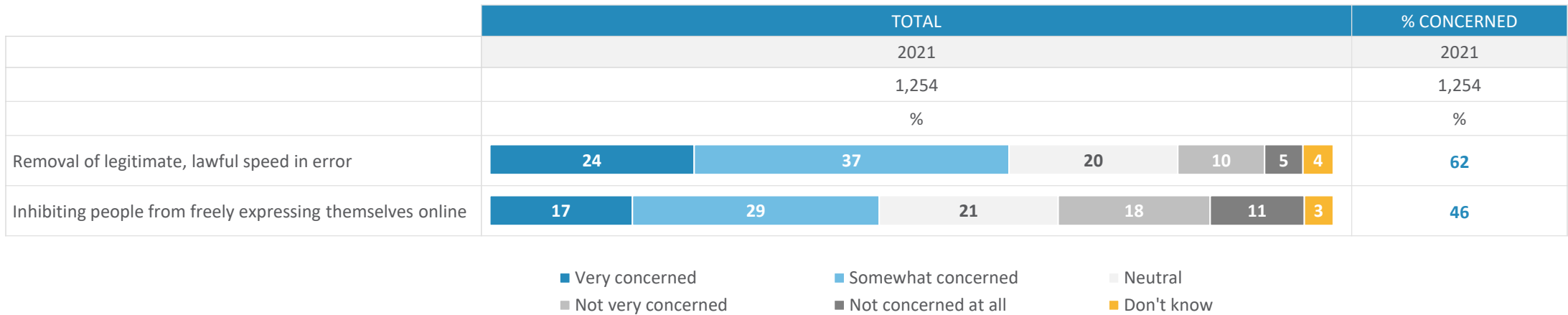


Q2021-4. How much would you support or oppose a new law in Canada requiring social media platforms to remove illegal content, including hate speech, within 24 hours of it being identified through a complaints process? Platforms that don't comply and/or fail to meet the deadline would face heavy fines.

Base: Total sample

CONCERN ABOUT IMPACTS OF A NEW LAW REQUIRING REMOVAL OF ILLEGAL CONTENT

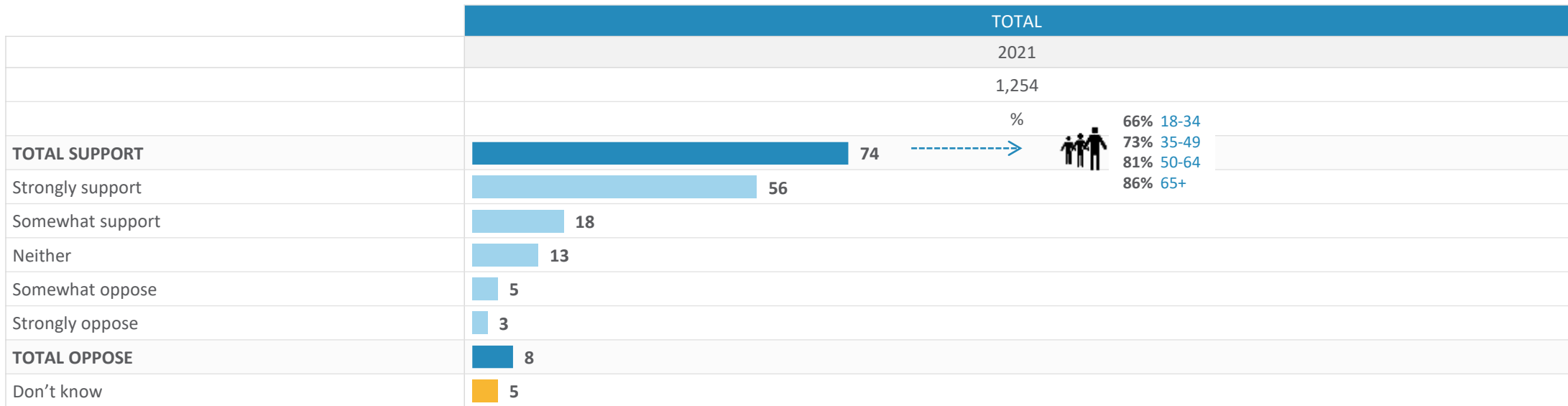
Concern is more pronounced for the potential removal of legitimate lawful speech (62% are concerned) than for inhibiting people from freely expressing themselves online (46%).



Q2021-5. How concerned are you, if at all, about the following potential impacts of a law requiring social media platforms to remove illegal content, including hate speech, within 24 hours?

Base: Total sample

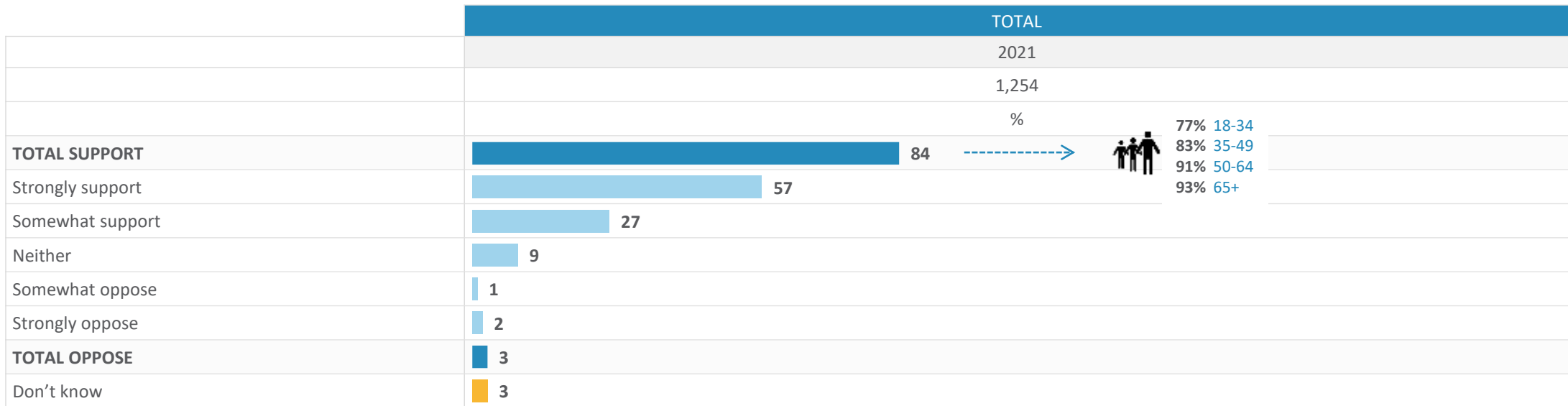
Most (74%) support the action of credit card companies to prohibit use of their cards on Pornhub.



Q2021-6. In December, 2020, the New York Times published a column entitled ‘The Children of Pornhub’, reporting that the Canadian website Pornhub hosts videos depicting non-consensual and underage sexual activity. In response, Mastercard and Visa announced that they had prohibited the use of their cards on Pornhub. How much do you support or oppose the action of Mastercard and Visa to prohibit the use of their cards on Pornhub?

Base: Total sample

There is broad support for giving ISPs and other network operators the authority to block websites that facilitate cyber attacks.

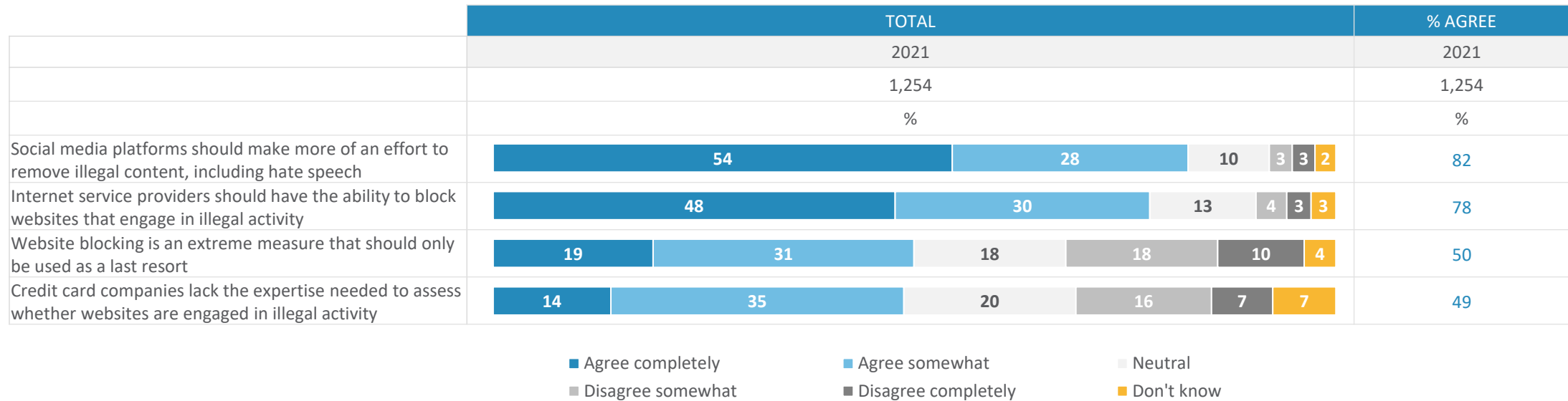


Q2021-7. Internet service providers and other network operators in Canada have the authority to block websites that host illegal content and/or engage in illegal activity. Recently, the Canadian Radio-television and Telecommunications Commission (CRTC), launched a consultation to consider measures to block websites used to facilitate cyber attacks, such as malware, ransomware, and identity theft. How much do you support or oppose giving internet service providers and other network operators in Canada the authority to block websites that facilitate cyber attacks?

Base: Total sample

ATTITUDES TOWARD WAYS OF BLOCKING ILLEGAL ACTIVITY ONLINE

There is broad agreement that social media platforms should make more of an effort to remove illegal content and that ISPs should have the ability to block websites that engage in illegal activity. However, half (50%) also agree that website blocking is an extreme measure that should only be used as a last resort.



Q2021-8. To what extent do you agree or disagree with the following statements?

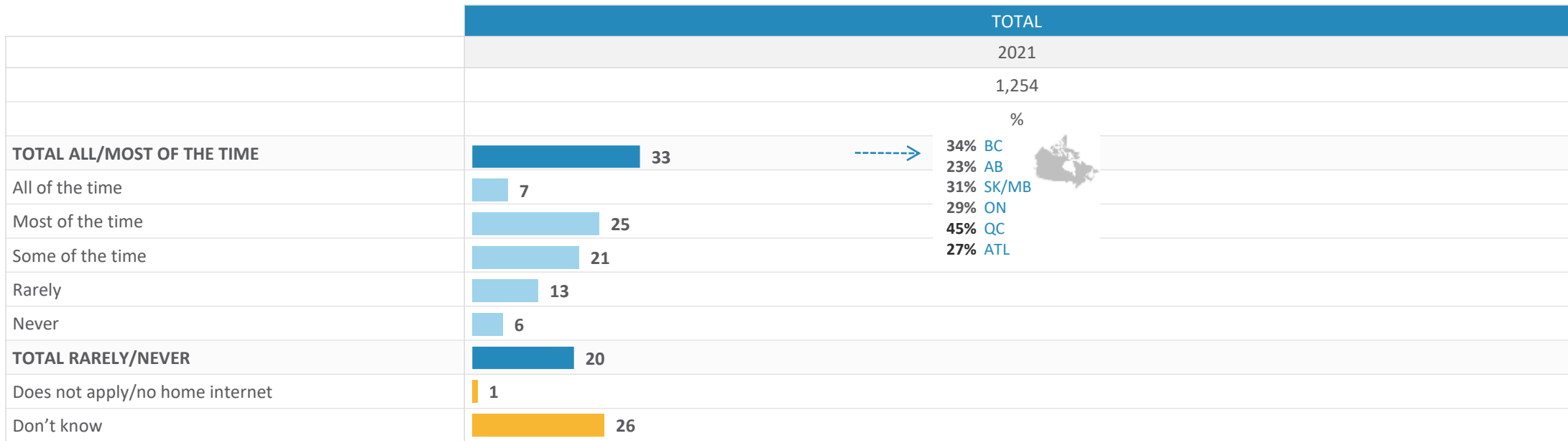
Base: Total sample

4

INTERNET SPEED AND MUNICIPAL NETWORKS

FREQUENCY OF RECEIVING 'UP TO' INTERNET SPEEDS

One-third (33%) believe their household receives the 'up to' internet speed included in their home internet package all or most of the time, while 20% say they rarely or never receive it. One-quarter (26%) don't know.

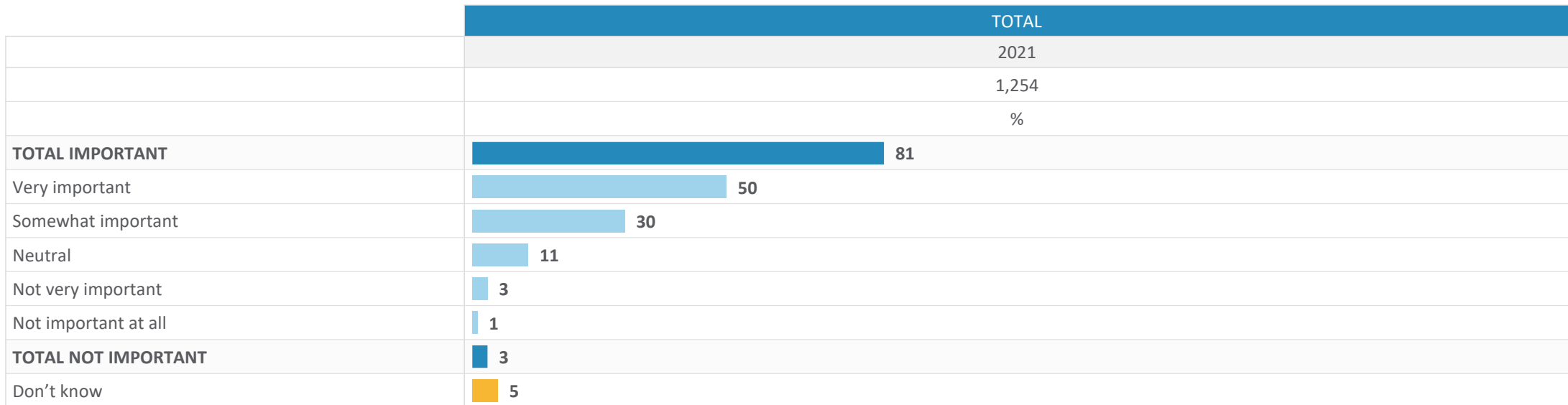


Q2021-9. Internet service providers in Canada sell internet access 'up to' certain speeds. Households that purchase internet access 'up to' 50 megabits per second do not always receive the maximum speed. As far as you know, how often does your household receive the 'up to' internet speed that is included in your home internet package?

Base: Total sample

IMPORTANCE OF TESTING PUBLICLY-FUNDED INTERNET PROJECTS AFTER COMPLETION

Most (81%) believe it is important that publicly-funded internet projects be tested after completion to ensure that networks deliver promised speeds.



Q2021-10. In November, 2020, the Government of Canada announced a \$1.75 billion Universal Broadband Fund, which aims to make high-speed internet available to all Canadians by 2030. In your view, how important or unimportant is it that publicly-funded internet projects be tested after completion to ensure that networks deliver promised speeds?

Base: Total sample

Opinions are divided about whether municipalities should create their own broadband internet networks. Almost half say it depends (30%) or they don't know (18%).

	TOTAL
	2021
	1,254
	%
Yes	31
No	21
It depends	30
Don't know	18

Q2021-11. Municipalities in Canada are typically responsible for infrastructure and utilities such as water and wastewater, heat, hydro, etc. In your view, should municipalities treat internet like infrastructure, and create their own municipal broadband internet networks?




Base: Total sample

5

ACCESSING GOVERNMENT SERVICES

INCIDENCE OF USING A FAX MACHINE TO SEND DOCUMENTS

More than one-in-ten (14%) indicate that they have used a fax machine to send documents to a government department or agency in the past year because it would not accept scanned documents by email.

	TOTAL	TRACKING
	2021	2020
	1,254	1,254
	%	%
Yes	 14	16
No	 82	82
Don't know	 4	3

Q11. In the past year, have you used a fax machine to send documents to a government department or agency because it would not accept receipt of scanned documents by email?

Base: Total sample

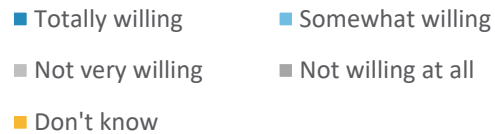
6

PRIVACY AND SECURITY OF PERSONAL INFORMATION/DATA

WILLINGNESS TO SHARE PERSONAL DATA IN EXCHANGE FOR BETTER PRODUCTS AND SERVICES

With the exception of online banking services to some extent, most indicate that they are unwilling to share their personal data in exchange for better products and services.

	TOTAL					% WILLING					
	2021					2020	2021	18-34	35-49	50-64	65+
	1,254					1,254	1,254	406	415	273	160
	%					%	%	%	%	%	%
Online banking services	9	39	23	24	4	52	49	47	52	51	43
Video streaming services	4	24	33	34	5	26	28	35	31	23	13
Social media websites	4	23	30	40	4	22	26	35	28	20	13
Digital advertising	3	15	29	49	4	17	17	24	18	13	7
Internet-connected devices like baby monitors	3	15	26	46	11	16	17	22	18	14	11




Q12. In general, how willing are you to share some of your personal data in exchange for better products and services from the following?

Base: Total sample

LEVEL OF CONCERN THAT BUSINESSES WITH ACCESS TO YOUR PERSONAL DATA WILLINGLY SHARE IT WITHOUT CONSENT

Fully 84% are at least somewhat concerned that businesses with access to customers' personal data willingly share it with third parties without consent (unchanged from 2019-2020).

	TOTAL		TRACKING	
	2021		2019	2020
	1,254		1,269	1,254
	%		%	%
TOTAL CONCERNED	84		87	86
Very concerned	48		50	49
Somewhat concerned	36		38	37
Neutral	10		8	9
Not very concerned	3		3	3
Not concerned at all	1		1	1
TOTAL NOT CONCERNED	4		3	4
Don't know	2		1	1

			75% 18-34
			85% 35-49
			89% 50-64
			93% 65+

Q14. How concerned are you that businesses with access to your personal data knowingly share it with third parties without your consent? (Q18 in 2019) How concerned are you that private businesses with access to your personal data willingly share it with third parties without your consent?

Base: Total sample

AWARENESS OF FEDERAL PRIVACY LAW THAT COVERS HOW BUSINESSES ARE REQUIRED TO HANDLE PERSONAL INFORMATION

Over half (54%) are aware that Canada has a federal privacy law that covers how businesses are required to handle personal information (unchanged from 2019-2020).








	TOTAL	TRACKING	
	2021	2019	2020
	1,254	1,269	1,254
	%	%	%
Yes	54	56	55
No	32	33	35
Don't know	13	11	10

Q15. Are you aware that Canada has a federal privacy law that covers how businesses are required to handle your personal information?

Base: Total sample

PERCEIVED LIKELIHOOD THAT BUSINESSES COMPLY WITH FEDERAL PRIVACY LEGISLATION

Over one-half (56%) believe it is likely that a majority of businesses in Canada comply with federal privacy legislation, while 35% think it is unlikely.








	TOTAL	TRACKING
	2021	2020
	1,254	1,254
	%	%
TOTAL LIKELY	 56	52
Very likely	 11	8
Somewhat likely	 45	44
Not very likely	 28	34
Not likely at all	 7	8
TOTAL NOT LIKELY	 35	42
Don't know	 9	6

Q16. In your view, how likely or unlikely is it that a majority of businesses in Canada comply with federal privacy legislation that covers requirements for handling your personal information?

Base: Total sample

LIKELIHOOD THAT NON-COMPLIANT BUSINESSES FACE PENALTIES OR PROSECUTION

Canadians are more likely to believe that businesses that fail to comply with federal privacy legislation hardly ever or never face penalties (40%) than they are to believe that they usually do face penalties (30%).

	TOTAL	TRACKING
	2021	2020
	1,254	1,254
	%	%
TOTAL OFTEN/SOMETIMES	 30	34
Often/all the time	 7	6
Sometimes	 24	28
Hardly ever	 34	35
Never	 6	6
TOTAL HARDLY EVER/NEVER	 40	41
Don't know	 30	25

Q17. As far as you know, how often do businesses in Canada that fail to comply with federal privacy legislation face penalties or prosecution?

Base: Total sample

LEVEL OF SUPPORT FOR CHANGE IN LEGAL AUTHORITY OF THE OPC

About three-quarters (77%) support a change in the OPC’s legal authority that would give it new powers to make orders and issue fines (down slightly from 82% in 2020).

	TOTAL	TRACKING
	2021	2020
	1,254	1,254
	%	%
TOTAL SUPPORT	77	82
Strongly support	41	52
Somewhat support	37	30
Neither support nor oppose	12	9
Somewhat oppose	2	1
Strongly oppose	<1	1
TOTAL OPPOSE	2	2
Don’t know	8	7

Q18. The Office of the Privacy Commissioner of Canada (OPC) oversees compliance with federal privacy legislation. Presently, the OPC lacks the power to order companies to comply with the law or to issue fines. How much do you support or oppose a change in the Commissioner’s legal authority that would give the OPC new powers to make orders and issue fines?

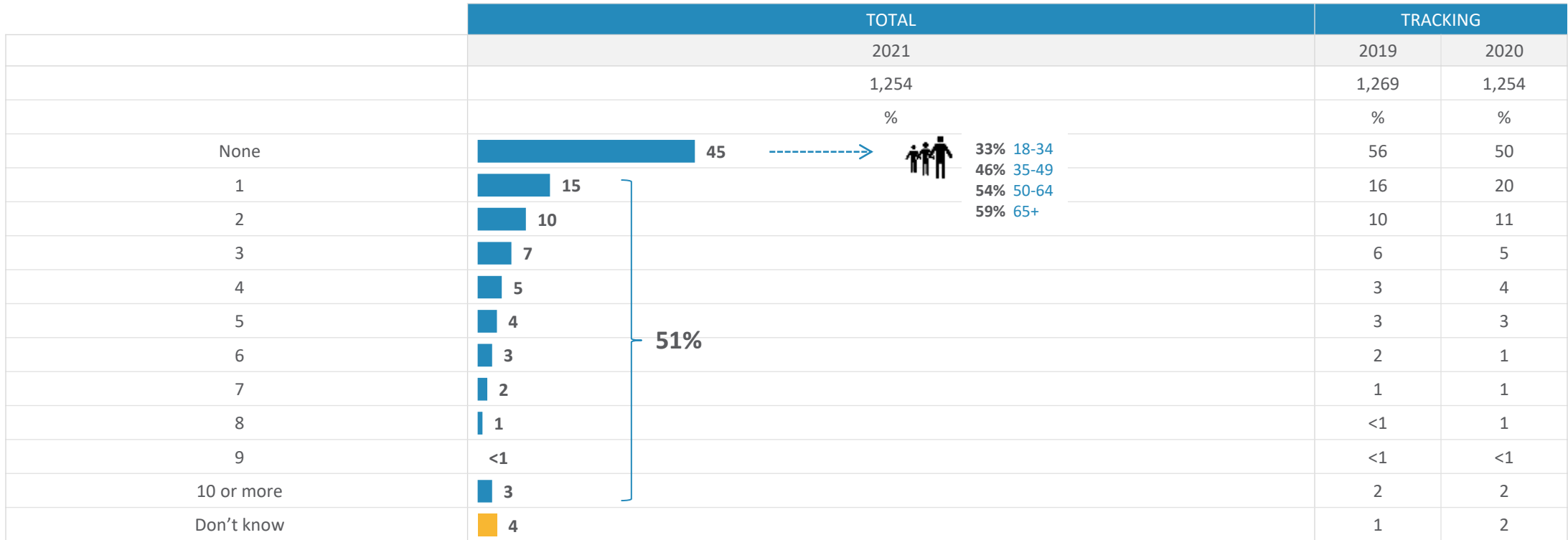
Base: Total sample

7

SMART HOME DEVICES AND IoT

NUMBER OF SMART HOME DEVICES/PRODUCTS IN HOUSEHOLD

Half (51%) report having at least one 'smart home' device in their household.

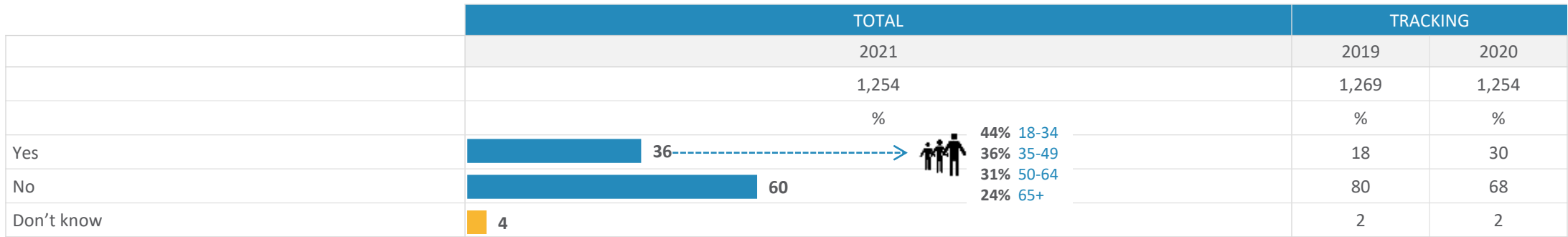


Q21. A 'smart home' device or product is one that is internet-connected so that you can control it using a phone, tablet, computer, or a separate system within your home. Examples include devices that can control temperature, lighting, security, or entertainment units. How many 'smart home' devices or products are there in your household?

Base: Total sample

VOICE-ACTIVATED DEVICE/ASSISTANT IN HOME

More than one-third (36%) report having a voice-activated connected-home device, up from 18% in 2019.



Q22. A voice-activated, “connected-home” device can be used to access the internet, control appliances, stream audio, etc., all using voice commands. It listens to your voice commands and replies with contextual responses. Do you have a voice-activated device/assistant in your home (e.g., Amazon’s Alexa, Google Home, Apple HomePod, etc.)?

Base: Total sample

CONCERNS ABOUT PRIVACY OR SECURITY RELATED TO CONNECTED-HOME DEVICES

Two-thirds (67%) have privacy or security concerns related to connected-home devices, down from 74% in 2020 and 77% in 2019.

	TOTAL	TRACKING		
	2021	Spring 2018	2019	2020
	1,254	1,203	1,269	1,254
	%	%	%	%
TOTAL HAVE CONCERNS	67	62	77	74
A lot of concerns	30	23	35	37
Some concerns	38	39	42	37
Not many concerns	17	23	13	14
No concerns at all	7	9	4	6
TOTAL DON'T HAVE CONCERNS	25	32	17	21
Don't know	8	6	6	6

Q23. Do you have any privacy or security concerns related to connected-home devices (e.g., Amazon's Alexa, Google Home, Apple HomePod, etc.)?

Base: Total sample

PRIVACY PRACTICES IN DAY-TO-DAY LIFE

Most people indicate that they use privacy practices in their day-to-day life, and most commonly a password on their phone (66%). Reported use of two-factor authentication is up (54%, up from 47% in 2020), as is biometrics (34%, up from 27% in 2020).




	TOTAL	
	2021	2020
	1,254	1,254
	%	%
YES TO ANY	85	85
<i>Password on your phone</i>	66	68
<i>Two-factor authentication</i>	54	47
<i>Changing default passwords on your devices</i>	37	38
<i>Biometrics (e.g., Apple Face ID)</i>	34	27
<i>Password manager</i>	29	27
None of the above	9	11
Don't know	6	4

Q24. Which of the following privacy practices, if any, do you use in your day-to-day life? Select all that apply.

Base: Total sample

AWARNESS OF 'INTERNET OF THINGS'

Awareness of the 'Internet of Things' has not increased over time. Only 35% report awareness.





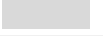




	TOTAL	TRACKING				
	2021	2016	2017	Spring 2018	2019	2020
	1,254	1,200	1,200	1,203	1,269	1,254
	%	%	%	%	%	%
Yes	 35	31	39	39	41	38
No	 59	62	55	55	55	56
Don't know	 6	7	6	6	4	6

Q26. The "Internet of Things" (IoT) refers to a growing network of physical objects with internet connectivity, and the communication that occurs between these objects and other internet-enabled devices and systems. A few examples of objects that can fall into the scope of Internet of Things include security systems, thermostats, cars, traffic signals, appliances, lights, hydro meters, etc. Had you heard of the "Internet of Things" before today?

Base: Total sample

CONCERN ABOUT POTENTIAL SECURITY THREATS RELATED TO THE INTERNET OF THINGS

About 7-in-10 (72%) are concerned about potential security threats related to the Internet of Things, up from 66% in 2016 but a little lower than in 2020.

	TOTAL	TRACKING				
	2021	2016	2017	2018	2019	2020
	1,254	1,200	1,200	1,203	1,269	1,254
	%	%	%	%	%	%
TOTAL CONCERNED	72   59% 18-34 75% 35-49 83% 50-64 79% 65+	66	73	71	78	77
Very concerned	31 	25	35	28	33	37
Somewhat concerned	41 	40	38	43	44	40
Neutral	14 	20	17	16	13	12
Not very concerned	4 	6	4	5	3	4
Not concerned at all	2 	1	1	1	<1	1
TOTAL NOT CONCERNED	6 	8	5	6	3	5
Don't know	7 	6	5	7	6	6

Q27. Devices and systems that are a part of the “Internet of Things” collect personal information/data that is shared with other devices and stored in databases on the internet. How concerned are you, if at all, about security threats related to the Internet of Things?

Base: Total sample

8

CYBERATTACKS AND CYBERSECURITY

SHOULD GOVERNMENT PROVIDE RESOURCES/INFRASTRUCTURE TO HELP BUSINESSES PROTECT AGAINST CYBERATTACKS?

Three-quarters (76%) believe that the government should provide resources and infrastructure to Canadian businesses to help protect them from cyberattacks.

	TOTAL	TRACKING	
	2021	2019	2020
	1,254	1,269	1,254
	%	%	%
TOTAL YES	76	77	79
Yes, definitely	40	35	44
Yes, probably	37	42	34
No, probably not	11	14	11
No, definitely not	2	3	4
TOTAL NO	13	17	15
Don't know	10	7	7

Q35. In your view, should the government provide resources and infrastructure to Canadian businesses to help protect them from cyberattacks?

Base: Total sample

SUPPORT FOR GOVERNMENT SPENDING TO FUND CYBERSECURITY INFRASTRUCTURE

A majority (67%) supports government spending to fund cybersecurity infrastructure for Canadian businesses.

	TOTAL	TRACKING	
	2021	2019	2020
	1,254	1,269	1,254
	%	%	%
TOTAL SUPPORT	67	64	66
Strongly support	27	23	28
Somewhat support	40	42	37
Neither support nor oppose	17	17	17
Somewhat oppose	6	9	7
Strongly oppose	2	4	4
TOTAL OPPOSE	8	13	11
Don't know	8	5	6

Q36. How much do you support or oppose government spending to fund cybersecurity infrastructure for Canadian businesses?

Base: Total sample

LEVEL OF CONCERN ABOUT HUAWEI TECHNOLOGIES SUPPLYING EQUIPMENT TO 5G NETWORKS

Two-thirds (66%) are concerned about potential cybersecurity risks from foreign-owned network technologies.

	TOTAL	
	2021	2020
	1,254	1,254
	%	%
TOTAL CONCERNED	66	69
Very concerned	33	39
Somewhat concerned	33	30
Neutral	17	15
Not very concerned	6	6
Not concerned at all	4	4
TOTAL NOT CONCERNED	10	10
Don't know	7	6

Q37. As you may know, Huawei Technologies is a large Chinese technology firm that is a global supplier of smartphones and telecommunications network equipment. Huawei supplies equipment to 5G networks, the fifth-generation of wireless networks that will eventually replace current 4G networks. How concerned are you, if at all, about potential cybersecurity risks from foreign-owned network technologies such as Huawei and 5G?

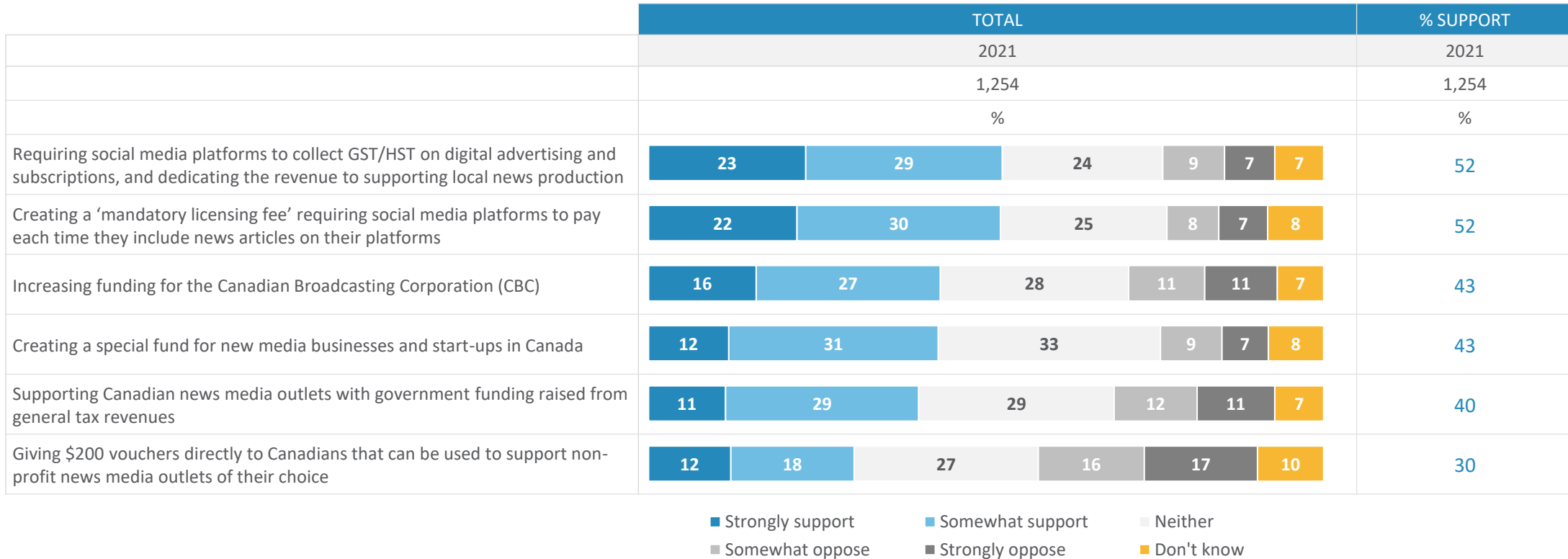
Base: Total sample

9

IMPROVING ACCESS TO LOCAL NEWS AND CREATIVE INDUSTRIES

LEVEL OF SUPPORT FOR GOVERNMENT ACTIONS TO SUPPORT LOCAL NEWS

Support is strongest (but still relatively tepid) for requiring social media platforms to collect GST/HST (52%) and creating a mandatory licensing fee (52%).

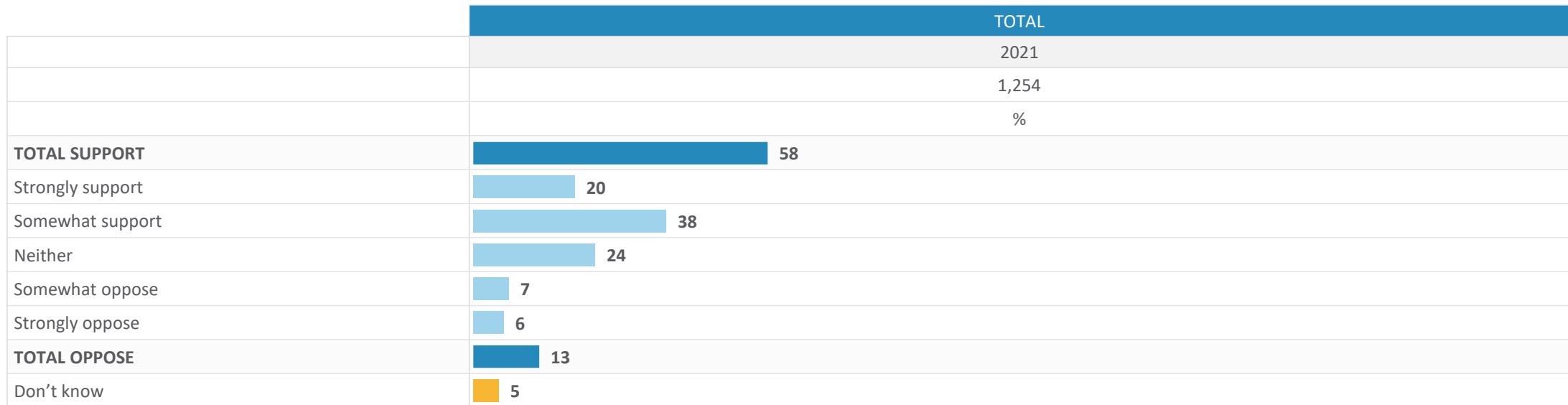


Q2021-12. Since the introduction of the internet, news media outlets in Canada have experienced sharp declines in advertising revenue over time, leading to industry consolidation and declines in the availability of 'local' news. Listed below are different possible government actions to help the news media industry in Canada deliver local news. Please indicate how much you support or oppose each one.

Base: Total sample

LEVEL OF SUPPORT FOR GOVERNMENT ACTION TO HELP NEWS MEDIA OUTLETS

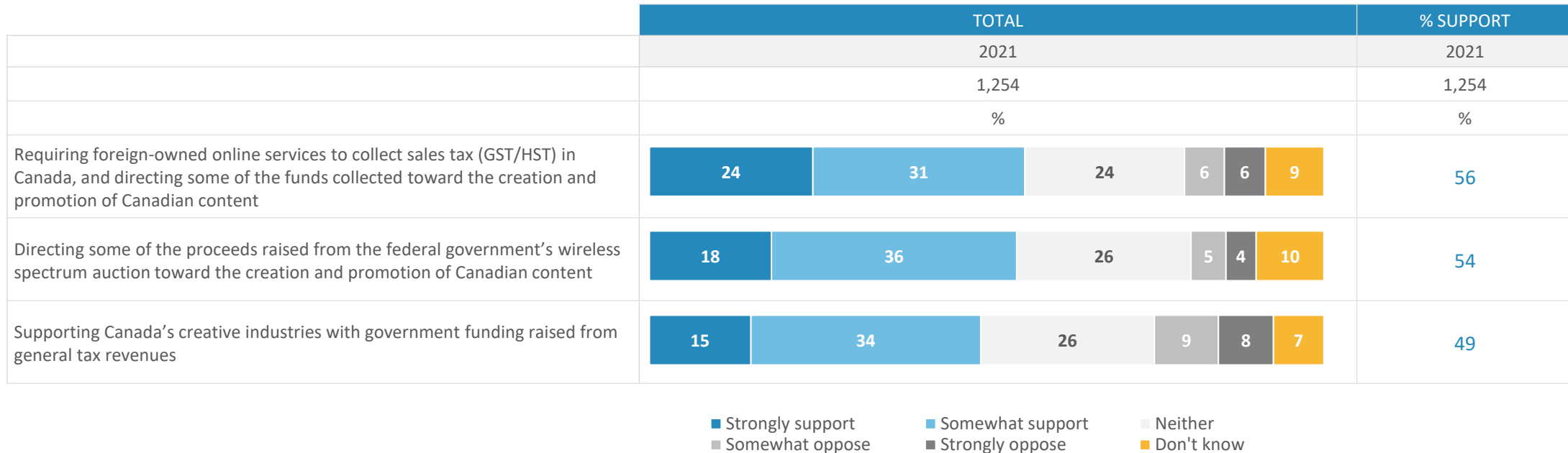
A majority (58%) supports the idea of government action to help news media outlets deliver local news.



Q2021-13. In general, how much do you support or oppose the idea of government action to help news media outlets in Canada deliver local news?

Base: Total sample

Support is strongest for requiring foreign-owned online services to collect GST/HST (56%), and redistributing funds generated by wireless spectrum sales (54%).

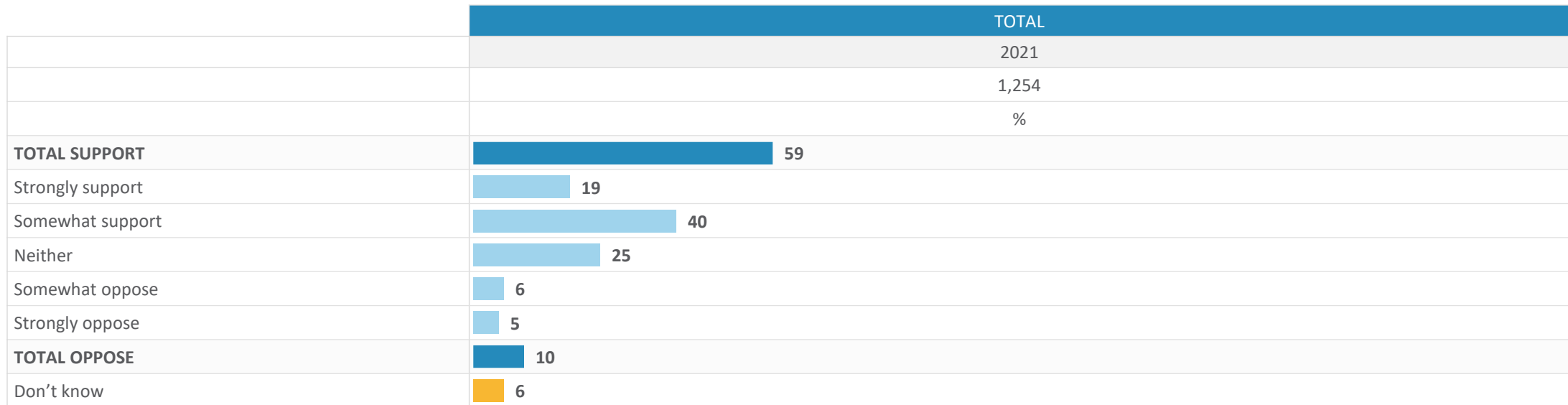


Q2021-14. Canada's *Broadcasting Act* sets out objectives to ensure that Canadian broadcasting content meets the needs and interests of Canadians. Listed below are different possible government actions to help Canada's creative industries (i.e., film, television, music and radio) deliver Canadian stories and music ('CanCon'). Please indicate how much you support or oppose each one.

Base: Total sample

LEVEL OF SUPPORT FOR GOVERNMENT ACTION TO HELP CANADA'S CREATIVE INDUSTRIES

Six-in-ten (59%) support the idea of government actions to stimulate the creation of content by Canada's creative industries (few – 10% -- oppose the idea).



Q2021-15. In general, how much do you support or oppose the idea of government actions to stimulate the creation of content by Canada's creative industries (i.e., film, television, music and radio)?




Base: Total sample

10

LOCATION OF INTERNET INFRASTRUCTURE AND CLOUD SERVICES

AWARENESS THAT CANADA'S INTERNET INFRASTRUCTURE RUNS THROUGH THE U.S.

One-third (33%) say they are aware that some of Canada's internet infrastructure runs through the United States.




	TOTAL	TRACKING				
	2021	2016	2017	Spring 2018	2019	2020
	1,254	1,200	1,200	1,203	1,269	1,254
	%	%	%	%	%	%
Yes	 33	29	31	46	47	31
No	 52	59	57	41	44	56
Don't know	 15	12	13	13	9	13

Q40. Are you aware that some of Canada's internet infrastructure runs through the United States, and that even communications beginning and ending in Canada may be routed through the U.S.?

Base: Total sample

AWARENESS THAT MANY CLOUD SERVICES IN CANADA STORE DATA IN THE U.S.

Fewer than half (44%) say they are aware that many cloud services in Canada store data on servers located in the United States.





	TOTAL	TRACKING				
	2021	2016	2017	Spring 2018	2019	2020
	1,254	1,200	1,200	1,203	1,269	1,254
	%	%	%	%	%	%
Yes	 44	33	36	47	50	44
No	 44	56	54	42	43	46
Don't know	 12	11	10	12	7	10

Q41. "Cloud computing" or storage means storing and accessing data and programs over the internet instead of on your *computer's* hard drive. Are you aware that many cloud services in Canada store data on servers located in the United States?

Base: Total sample

PREFERENCE FOR CLOUD SERVICES IN CANADA OR U.S.

Given a choice, most (76%) say they would prefer to use cloud services whose servers are located in Canada.

	TOTAL	TRACKING		
	2021	Spring 2018	2019	2020
	1,254	1,203	1,269	1,254
	%	%	%	%
Canada	 76	67	79	78
United States	 2	2	2	2
Neither	 9	15	10	8
Don't know	 14	15	9	11


Q42. Given a choice, would you prefer to use cloud services whose servers are located in Canada or in the United States?

Base: Total sample

IMPORTANCE THAT CANADA'S INTERNET SERVICE PROVIDERS INVEST IN BUILDING UP INTERNET INFRASTRUCTURE IN CANADA

About three-quarters (77%) believe it is important that Canada's internet service providers and online service companies invest in building up internet infrastructure inside Canada's borders.

	TOTAL	TRACKING				
	2021	2016	2017	Spring 2018	2019	2020
	1,254	1,200	1,200	1,203	1,269	1,254
	%	%	%	%	%	%
TOTAL IMPORTANT	77	75	81	79	81	80
Critically important	40	42	53	42	39	43
Somewhat important	37	33	28	37	42	37
Neither important nor unimportant	11	15	11	11	9	9
Not very important	3	3	2	3	3	3
Not important at all	1	1	1	2	1	2
TOTAL NOT IMPORTANT	4	4	3	5	4	4
Don't know	8	6	5	5	6	7




68% 18-34
79% 35-49
85% 50-64
86% 65+

Q43. In your view, how important is it that Canada's internet service providers and online service companies invest in building up internet infrastructure inside Canada's borders so that online communications/data do not need to be stored in or routed through the United States?

Base: Total sample

LEVEL OF SUPPORT FOR GOVERNMENT SPENDING TO BUILD UP CANADA'S INTERNET INFRASTRUCTURE

More than 7-in-10 (72%) say they support government spending to build up Canada's internet infrastructure to make it less reliant on U.S. service providers (unchanged from 2019).

	TOTAL		TRACKING	
	2021		2019	2020
	1,254		1,269	1,254
	%		%	%
TOTAL SUPPORT	72		74	72
Strongly support	37		35	36
Somewhat support	35		39	36
Neither support nor oppose	16		15	14
Somewhat oppose	4		4	5
Strongly oppose	2		3	3
TOTAL OPPOSE	6		7	8
Don't know	6		4	6


67%	18-34
70%	35-49
80%	50-64
81%	65+

Q44. (Q43 in 2019) How much do you support or oppose government spending to build up Canada's internet infrastructure to make it less reliant on U.S. service providers?

Base: Total sample

IMPORTANCE THAT GOVERNMENT DATA BE STORED AND TRANSMITTED IN CANADA ONLY

Eight-in-ten (81%) believe it is important that government data, including the personal information of Canadians, be stored and transmitted in Canada only. More than half (54%) believe it is ‘critically’ important.










	TOTAL		TRACKING	
	2021		2019	2020
	1,254		1,269	1,254
	%		%	%
TOTAL IMPORTANT	81	 <ul style="list-style-type: none"> 75% 18-34 79% 35-49 89% 50-64 93% 65+ 	86	83
Critically important	54		55	55
Somewhat important	28		31	28
Neither important nor unimportant	10		7	9
Not very important	3		2	2
Not important at all	1		1	1
TOTAL NOT IMPORTANT	3		3	3
Don't know	5		4	5

Q45. In your view, how important is it that government data, including the personal information of Canadians, be stored and transmitted in Canada only?

Base: Total sample

LEVEL OF CONCERN ABOUT THE SECURITY AND PRIVACY OF PERSONAL DATA IF STORED IN OR ROUTED THROUGH U.S.

Most (73%) are concerned about the security and privacy of their personal information if it is stored in or routed through the United States.

	TOTAL	TRACKING				
	2021	2016	2017	Spring 2018	2019	2020
	1,254	1,200	1,200	1,203	1,269	1,254
	%	%	%	%	%	%
TOTAL CONCERNED	73   61% 18-34 72% 35-49 82% 50-64 86% 65+	64	76	69	78	76
Very concerned	35 	29	41	32	37	39
Somewhat concerned	37 	36	35	37	41	37
Neutral	15 	20	14	18	14	12
Not very concerned	6 	9	5	6	3	6
Not concerned at all	2 	3	2	2	1	1
TOTAL NOT CONCERNED	8 	11	7	9	5	8
Don't know	5 	4	3	4	3	4

Q46. How concerned are you, if at all, about the security and privacy of your personal information/data on the internet if it is stored in or routed through the United States?

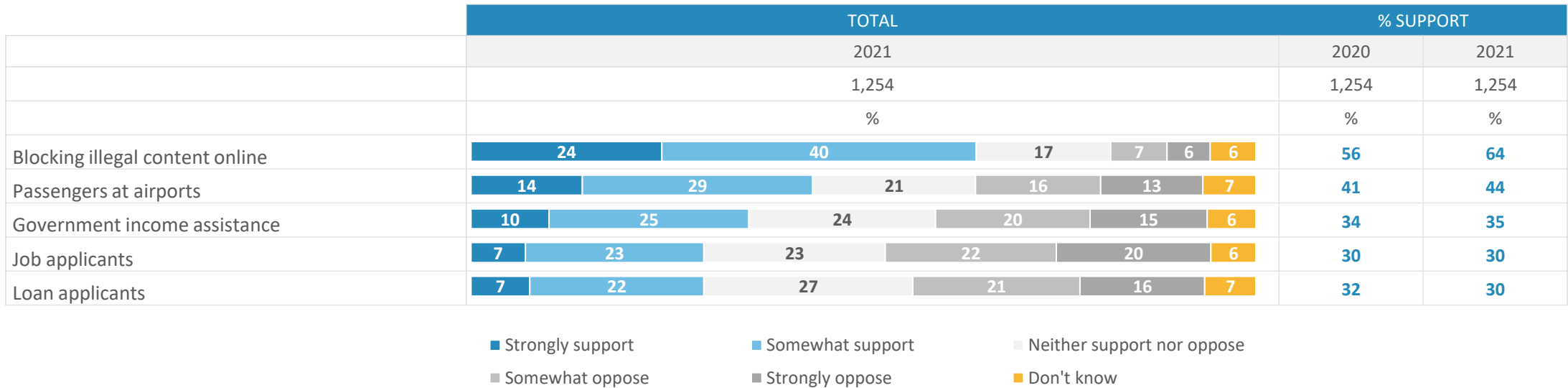
Base: Total sample

11

AI AND FACIAL RECOGNITION

SUPPORT FOR USE OF AI IN DIFFERENT CONTEXTS

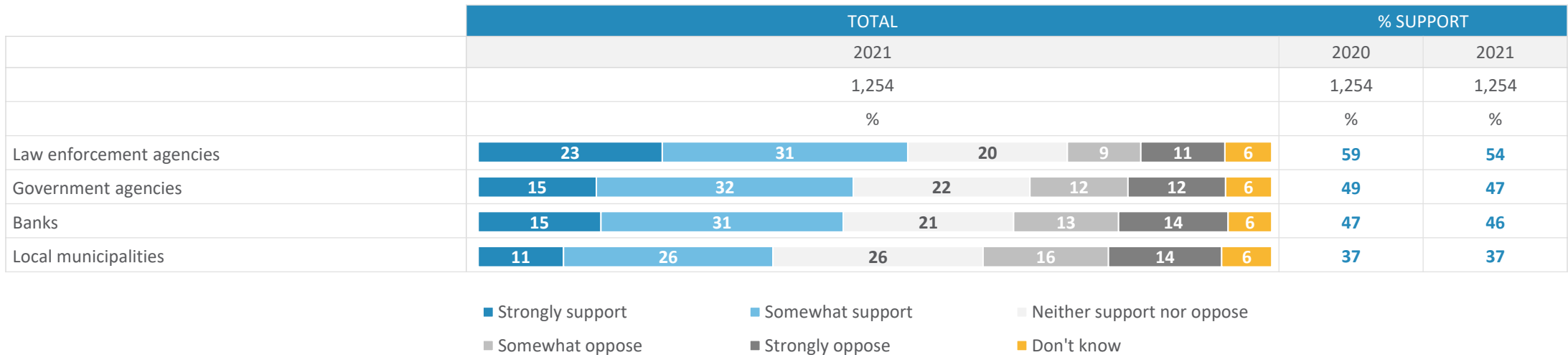
A majority supports the use of AI for blocking illegal content online, but not for other purposes. Support is higher in 2021 (64%) than in 2020 (56%).



Q49. Artificial intelligence (AI) allows computers to perform tasks more commonly associated with human decision-making. How much do you support or oppose AI being used for screening in the following contexts?

Base: Total sample

A modest majority supports the use of facial recognition technology by law enforcement agencies. Canadians are less likely to support its use by other entities.



Q50. Facial recognition technology uses biometrics to scan and map facial features from a photograph or video camera. It compares the information with a database of known faces to find a match. How much do you support or oppose facial recognition technology being used by the following kinds of agencies or institutions?

Base: Total sample

12

SAMPLE DEMOGRAPHICS

Sample Demographics

GENDER



	2019	2020	2021
Male	49%	48%	47%
Female	50%	52%	52%
Non-binary	<1%	<1%	<1%
Prefer not to answer	<1%	<1%	<1%

AGE



	2019	2020	2021
18 to 34	28%	33%	32%
35 to 49	25%	33%	33%
50 to 64	28%	20%	22%
65+	19%	14%	13%

EDUCATION



	2019	2020	2021
Some high school	2%	1%	2%
Graduated from high school	10%	10%	10%
Some college/technical/CEGEP	10%	11%	10%
Graduated from college	15%	17%	17%
Some university	8%	11%	9%
Graduated from university	32%	33%	34%
Post-graduate degree	22%	15%	17%
Prefer not to answer	1%	<1%	1%

EMPLOYMENT



	2019	2020	2021
Working full or part-time	67%	67%	65%
Unemployed and looking for work	2%	3%	4%
Unemployed and not looking for work	2%	1%	3%
Student	4%	8%	6%
Stay-at-home parent	1%	2%	3%
Retired	22%	17%	16%
Prefer not to answer	3%	3%	3%

REGION




	2019	2020	2021
Newfoundland	1%	1%	1%
Prince Edward Island	1%	<1%	<1%
Nova Scotia	3%	2%	3%
New Brunswick	2%	2%	2%
Quebec	24%	24%	24%
Ontario	38%	39%	38%
Manitoba	4%	4%	4%
Saskatchewan	3%	3%	3%
Alberta	11%	11%	11%
British Columbia	13%	13%	13%
Yukon/NWT/Nunavut	<1%	<1%	<1%

Base: Total sample (2019 n=1269, 2020 n=1254, 2021 n=1254)

Sample Demographics

HOUSEHOLD INCOME

	2019	2020	2021
 Less than \$25,000	4%	6%	6%
\$25,000 to just under \$50,000	9%	14%	14%
\$50,000 to just under \$75,000	15%	17%	17%
\$75,000 to just under \$100,000	17%	17%	16%
\$100,000 to just under \$150,000	18%	16%	17%
\$150,000 to just under \$200,000	9%	8%	8%
\$200,000 or more	8%	6%	7%
Prefer not to answer	20%	17%	15%


NUMBER OF PEOPLE IN HOUSEHOLD

	2019	2020	2021
 One	20%	19%	22%
Two	46%	40%	34%
Three	15%	18%	21%
Four or more	18%	20%	22%
Prefer not to answer	2%	2%	2%


CHILDREN UNDER 18

	2019	2020	2021
 Yes	20%	23%	26%
No	78%	75%	72%
Prefer not to answer	2%	2%	2%

AGES OF CHILDREN UNDER 18

	2019	2020	2021
 2 years or younger	27%	22%	24%
3-4 years	13%	14%	17%
5-6 years	17%	15%	12%
7-8 years	14%	18%	18%
9-10 years	16%	13%	16%
11-12 years	14%	17%	16%
13-14 years	13%	15%	17%
15-17 years	25%	23%	25%
Prefer not to answer	8%	4%	2%

USE AN INTERNET-CONNECTED MOBILE PHONE

	2019	2020	2021
 Yes	90%	90%	90%
No	8%	8%	7%
Don't know	1%	1%	1%
Prefer not to answer	1%	2%	2%

Base: Total sample (2019 n=1269, 2020 n=1254, 2021 n=1254), Ages of Children under 18 yrs. (2019 n=248, 2020 n=287, 2021 n=327)