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Coleta de Dados na Internet no Censo de População Canadense de 2016

www.statcan.gc.ca



Telling Canada's
story in numbers

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Canada 



The Canadian Census collection cycle at a glance

- Census Day: May 10th, 2016
- Multi-mode collection:
 - Self-Response between May 2 to July 31, but mostly in May
 - Internet and paper questionnaires – We mail or deliver Invitation Letters or Paper Questionnaires
 - Non-Response Follow-up (NRFU) in June and July
 - Mostly in person, but also by phone
- Second largest country in the world, 35,151,728 people enumerated in 2016
 - Majority of population concentrated in urban areas (mostly in the South),
 - Majority of territory is rural/remote areas
 - Special enumeration procedures for collective dwellings, aboriginal communities (reserves), and remote areas

Collection Response Rates - Highlights

	2011 Census	2016 Census	
Collection Rate	Actual	Planned	Actual
Census Collection rate	98.1%	98%	98.4%
Internet	53.8%	65%	68.3%
Paper	31.3%	20%	20.5%
Self-Response	85.2%	85%	88.8%
Non-response follow-up (NRFU)	12.9%	13%	9.7%
Workload at start of NRFU	4.8 M	4.5M	3.7 M

Collection Response Rates over the years

Census Year	Collection Response Rates	Internet Response Rates	Self-Response Rates
2001	98.4	(Small test)	75.6
2006	96.5	18.3	78.5
2011	98.1	53.8	85.2
2016	98.4	68.3	88.8

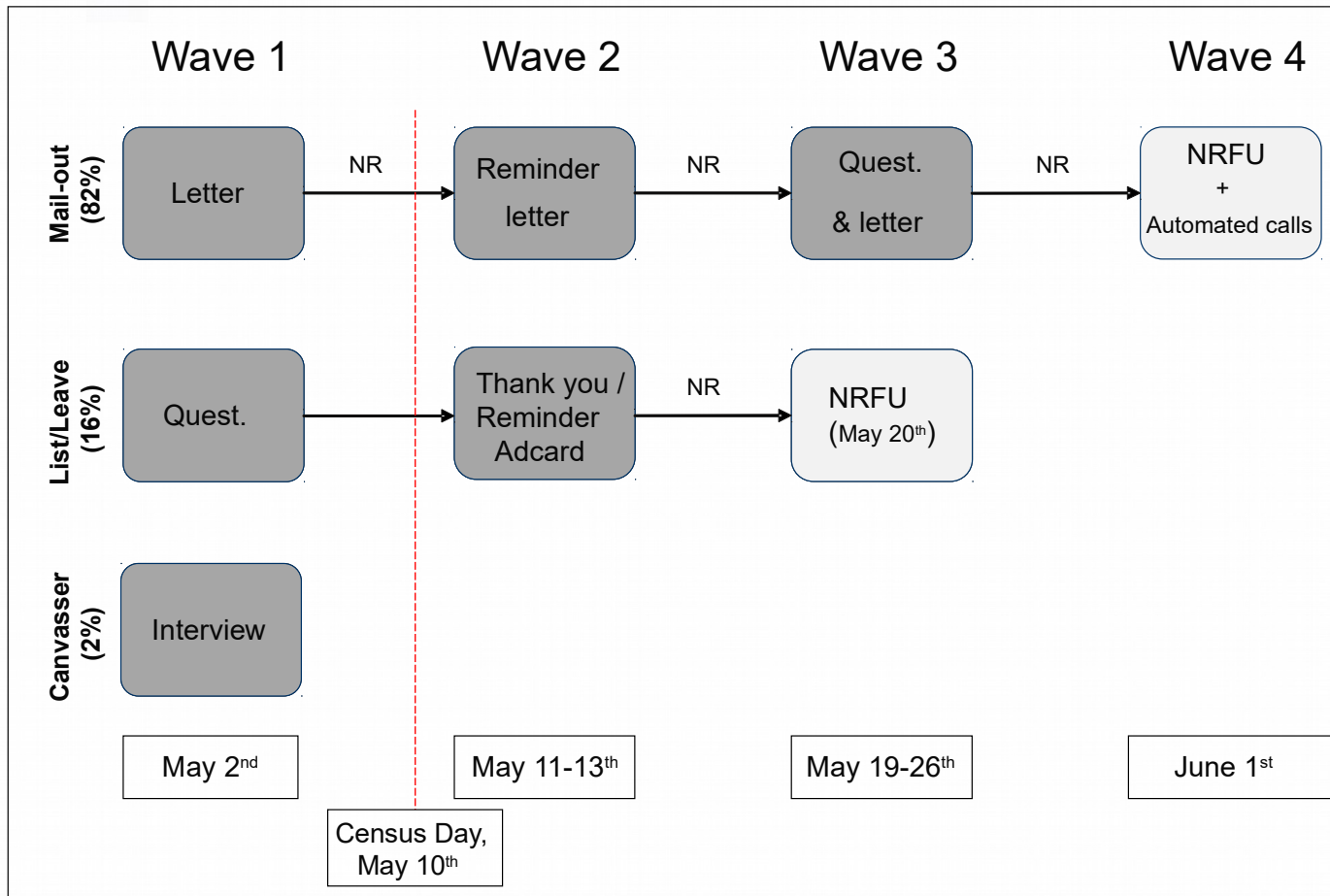


Wave Methodology Overview

- Approach to remind Canadians to fill out their census form, at specific times throughout the collection period
- Increases Self-Response while encouraging households to respond by Internet
- Concept of the Wave Methodology:
 - Wave 1: Mail out an Invitation Letter instead of a questionnaire.
 - No immediate option for paper response but the letter provides an effective method to request a paper questionnaire (about 1 million requests in 2016 (8% of the dwellings)).
 - Availability of an automated system to request a paper questionnaire was essential
 - Wave 2: As the returns from Wave 1 starts to decline, mail out a reminder letter
 - Wave 3: As the returns from Wave 2 starts to decline, mail out a paper questionnaire
 - Wave 4: As the returns from Wave 3 starts to decline, start NRFU
- Aligned public communication messages



2016 Census Wave Methodology



Evolution of Internet Collection in the Canadian Census

Census Year	Highlights	Internet Response rate
2001	Test conducted in two sites in Canada. Take-up rate of 5% and 4% respectively.	-
2006	Passive offer: Secure Access Codes printed on Paper questionnaire.	18.3%
2011	Wave methodology used for the first time: <ul style="list-style-type: none"> • Letter sent at wave 1 to 75% of Mail-Out dwellings (60% of the dwellings) • Questionnaire sent or delivered at wave 1 to the other dwellings. 	53.8%
2016	<ul style="list-style-type: none"> • Letter sent at wave 1 to all mail-out dwellings (82% of the dwellings). • Questionnaire delivered at wave 1 to the List/Leave dwellings 	68.3%
2021	<ul style="list-style-type: none"> • Letter sent at wave 1 to all mail-out dwellings (87-88% of the dwellings) • We are testing delivering a letter at wave 1 to the List/Leave dwellings 	??

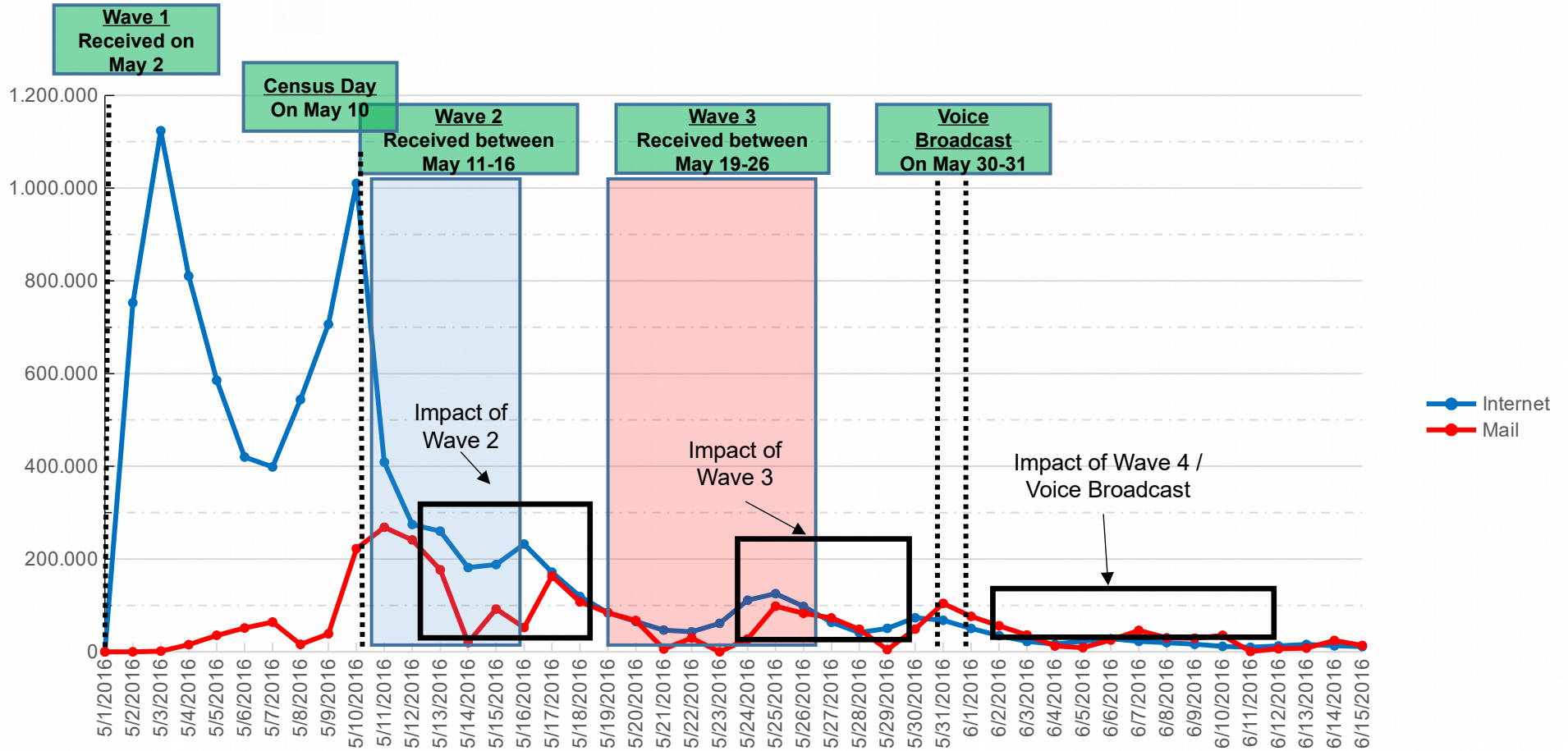
Response Rates by Collection Methodologies

Collection method	Response Mode							Non-response	Total
	Self-Response			Interview					
	Mail	Internet	Total	CHL	NRFU		Total		
					Field	CSU			
Mail-Out	12.7%	76.2%	89.0%	1.1%	7.4%	0.9%	9.4%	1.6%	100.0%
List-leave	64.1%	23.6%	87.7%	0.5%	9.3%	1.3%	11.1%	1.2%	100.0%
Subtotal	20.5%	68.3%	88.8%	1.0%	7.7%	1.0%	9.7%	1.5%	100.0%

Live test conducted in 2011

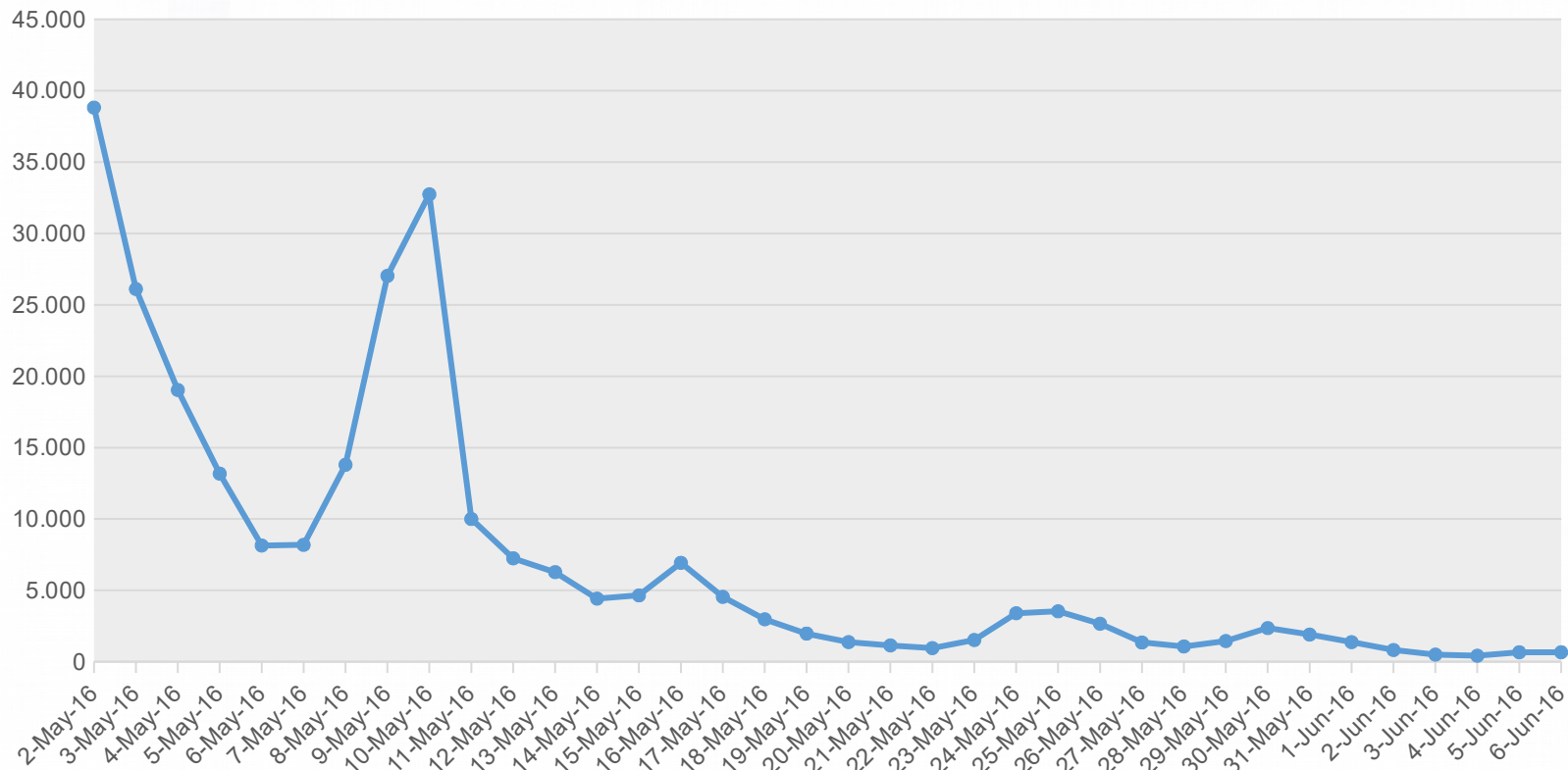
Collection method	Response mode				Non-response	Total
	Mail	Internet	CHL	NRFU		
Letter at W1	16.3%	71.6%	0.7%	9.1%	2.3%	100.0%
Questionnaire at W1	53.3%	32.3%	0.5%	11.6%	2.4%	100.0%

Internet and Mail Daily Return Rate



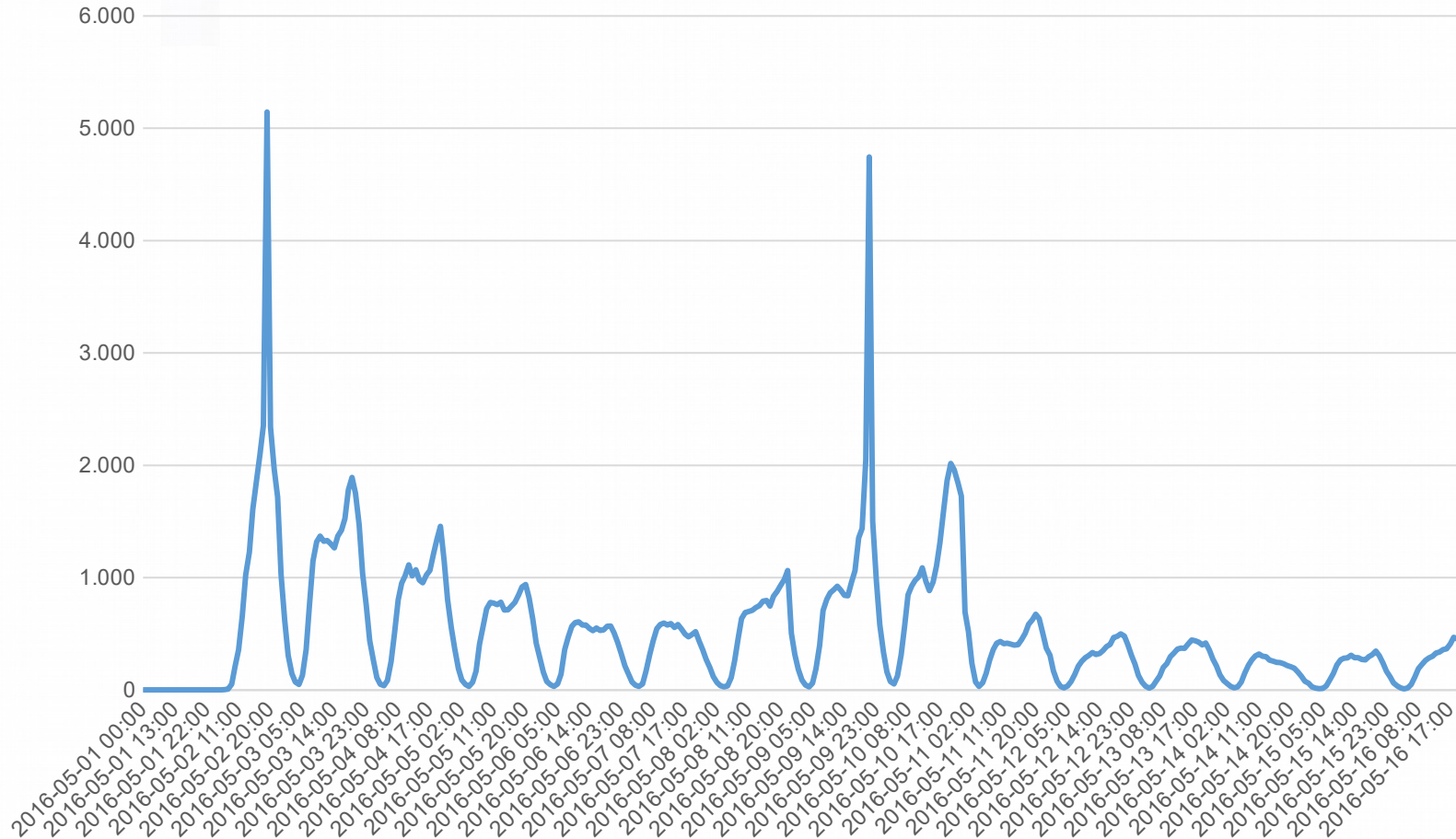


Number of concurrent Internet respondents, by day

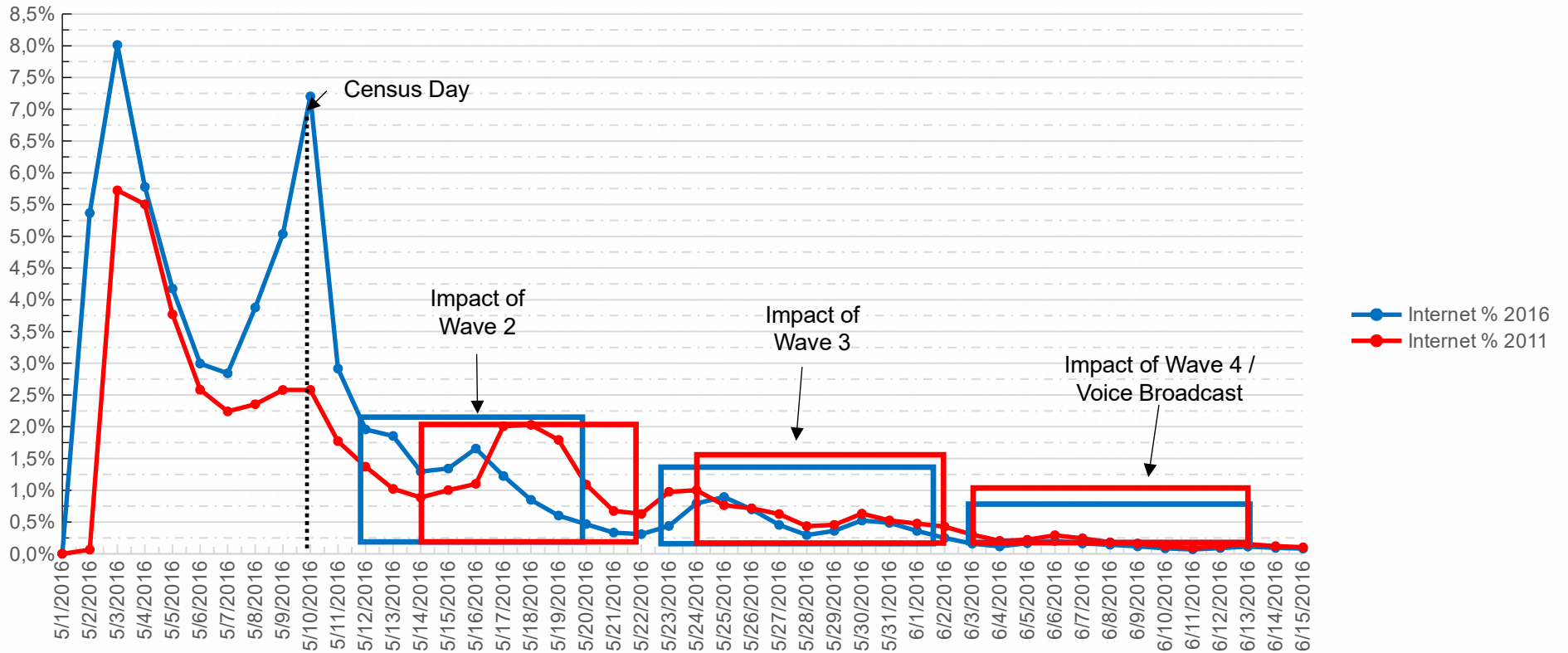




Number of Logins per hour per day, first 16 days



Internet Daily Return Rate – 2011 vs 2016



Wave 1 Letter

May 2, 2016

Dear Sir / Madam:

This letter provides instructions for completing your 2016 Census questionnaire. **Please complete it by May 10.**

Census information is important for your community and is used in planning services such as schools, public transportation, senior housing and police and fire services. Please note that completion of the census questionnaire is required by law.

- **Complete it online at www.census.gc.ca.** Enter the 16-digit secure access code located above and follow the instructions. It's quick and easy.

OR

- **Call 1-855-699-2016 if you prefer to receive the paper questionnaire.** Enter the 16-digit secure access code located above and follow the automated instructions. It takes less than a minute.

If you have questions, call 1-855-700-2016. Operators are available from 8:00 a.m. to 8:00 p.m. Monday to Friday and from 8:30 a.m. to 4:30 a.m. on the weekend. Respondents with access to TTY (a telecommunications device for people who are deaf) should call 1-866-753-7083.

By law, your responses will be kept confidential.

Thank you for your cooperation.

Wayne R. Smith
Chief Statistician of Canada

Wave 2 Letter

May 10, 2016

Subject: **Census reminder**

This letter is a reminder for those households that have not yet completed their census questionnaire. If you have already completed your questionnaire, please accept my thanks.

Completion of the census questionnaire is required by law. If you have not yet completed your census questionnaire, please **complete it today.**

- **Complete it online at www.census.gc.ca.** Enter the 16-digit secure access code located above and follow the instructions. It is quick and easy.

OR

- **Call 1-855-699-2016, if you prefer to receive the paper questionnaire.** Enter the 16-digit secure access code located above and follow the automated instructions. It takes less than a minute.

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Chief Statistician of Canada

Wave 3 Letter

May 18, 2016

Subject: **Census final notice**

This is a final reminder to households that have not met their legal obligation to complete and return a census questionnaire. If your household have already completed a questionnaire, please accept my thanks. If not, please reply today.

To fulfill this legal obligation you must:

- **Complete it online at www.census.gc.ca.** Enter the 16-digit secure access code located above and follow the instructions. It is quick and easy.

OR

- **Complete the paper questionnaire and return it in the enclosed envelope.**

If you have questions, call 1-855-700-2016. Operators are available from 8:00 a.m. to 8:00 p.m. Monday to Friday and from 8:30 a.m. to 4:30 a.m. on the weekend. Respondents with access to TTY (a telecommunications device for people who are deaf) should call 1-866-753-7083.

Statistics Canada will contact your household by phone or in person if you have not completed and returned your census questionnaire by May 31, 2016.

If you refuse to respond to the census questions, information to that effect may be referred Public Prosecution Service of Canada for further action.

By law, your responses will be kept confidential.

Thank you for your cooperation.

Wayne R. Smith
Chief Statistician of Canada



Content and format of Wave material

- Needed a cost effective way to mail-out a planned 13.3M Wave 1 letters and 8.4 Wave 2 reminder letters (on demand) with variable imaged addresses and secure access codes.
- Self-mailer:
 - Eliminates requirement for separate envelope
 - No insertion step required
 - Environmentally friendly (less waste)
 - Considered a more “official” presentation to public
 - Printer had capacity to produce 1.6M letters per day
- Two waves of qualitative studies plus Census Test were conducted to establish the content of each letter:
 - To promote the internet response channel
 - To encourage respondents to respond quickly
 - Best transition of messages, from benefits to legal aspect
 - Clear and simple

SECURE ACCESS CODE • CODE D'ACCÈS SÉCURISÉ
ON REVERSE
DU VERSO



Statistics Canada / Statistique Canada

PO Box 99995 2th Flr-GareWest / CP 99995 Succ 99-GareWest
Ottawa ON K1A 8Z8 / Ottawa ON K1A 8Z8



2016 Census

Complete the census—it's the law.

Recensement de 2016

Répondez au recensement — c'est la loi.

FOR INFORMATION ONLY

Canada

Plier et découper suivant les lignes pointillées.

Fold and tear along dotted lines.

Plier et découper suivant les lignes pointillées.

Fold and tear along dotted lines.

SECURE ACCESS CODE • CODE D'ACCÈS SÉCURISÉ

www.census.gc.ca • www.recensement.gc.ca

May 2, 2016

Dear Sir/Madam:

This letter provides instructions for completing your 2016 Census questionnaire. Please **complete it by May 10.**

Census information is important for your community and is used in planning services such as schools, public transportation, senior housing and police and fire services. Please note that completion of the census questionnaire is required by law.

- Complete it online at www.census.gc.ca. Enter the 16-digit secure access code located above and follow the instructions.

OR

- Call 1-855-699-2016 if you prefer to receive the paper questionnaire. Enter the 16-digit secure access code located above and follow the automated instructions. It takes less than a minute.

If you have questions, call 1-855-700-2016. Operators are available from 8:00 a.m. to 8:00 p.m. Monday to Friday and from 8:30 a.m. to 4:30 p.m. on the weekend. Respondents with access to TTY (a telecommunications device for people who are deaf) should call 1-866-753-7063.

By law, your responses will be kept confidential.

Thank you for your cooperation.

Wayne R. Smith
Chief Statistician of Canada / Statisticien en chef du Canada



Statistics Canada / Statistique Canada

Le 2 mai 2016

Madame, Monsieur,

Cette lettre vous informe des directives à suivre pour répondre à votre questionnaire du Recensement de 2016. Veuillez y répondre d'ici le 10 mai.

Les données du recensement sont importantes pour votre collectivité et servent à planifier des services comme les écoles, le transport public, les résidences pour personnes âgées, ainsi que les services de police et de protection contre les incendies. Veuillez noter que remplir le questionnaire du recensement est une exigence prévue par la loi.

- Remplissez-le en ligne à l'adresse www.recensement.gc.ca. Entrez le code d'accès sécurisé de 16 chiffres indiqué ci-dessus et suivez les instructions.

OU

- Composez le 1-855-699-2016 si vous préférez recevoir le questionnaire papier. Entrez le code d'accès sécurisé de 16 chiffres indiqué ci-dessus et suivez les instructions automatisées. Cela prend moins d'une minute.

Si vous avez des questions, composez le 1-855-700-2016. Les téléphonistes sont disponibles de 8 h à 20 h du lundi au vendredi et de 8 h 30 à 16 h 30 le samedi et le dimanche. Les utilisateurs du service ATS (un appareil de télécommunications pour personnes sourdes) doivent composer le 1-866-753-7063.

En vertu de la loi, vos réponses demeureront confidentielles.

Je vous remercie de votre collaboration.

Canada



Communication program

- A national public communication program aligned with the Wave Methodology
- **Wave 1 – started May 2**
 - **Letter:** This letter provides instructions for completing your 2016 Census questionnaire. **Please complete it by May 10.**
 - **Envelope message:** Complete the census-it's the law
 - **Media advisory:** Completing the census online is **quick, easy and secure.**
 - **TV/Radio ads: Reasons why census is important.** What's really arriving in the mail is a chance to shape where you live.



Communication program

- **Wave 2 – started May 11**
 - **Letter:** Census Reminder - **Completion of the census questionnaire is required by law. Please complete it today.**
 - **Envelope message:** Census Reminder - **Complete it today-it's the law. Delays increase census costs for every Canadian.**
 - **Media advisories :** May 10 is Census Day; **it's not too late:** Please submit your completed questionnaire as soon as possible.
 - **TV/Radio ads :** By now, you should have received your Census in the mail; What you're really doing is shaping where you live.



Communication program

- **Wave 3 – started May 19**

- **Letter:** Census Reminder - Completion of the census questionnaire is **required by law**. If you have not yet completed your census questionnaire, please **complete it today. Consequences for not answering.**
- **Envelope message:** **2016 Census: final notice**. Complete it today. Completion of the census is required by law.
- **TV/Radio ads:** Please take the time to complete your 2016 Census, using the package you received in the mail.



Behind the scene

Master Control System (MCS)

- Central system that integrated information from other collection and processing systems.
- List of all dwellings in Canada to which a questionnaire is mailed or dropped off
 - Source of addresses for mail-out is the Address Register (AR)
 - Record on the MCS for each dwelling with a mail-able address.
 - Record on the MCS for each anticipated dwelling in list/leave areas (no addresses available)
 - Each record given a unique frame-id and a secure access code
- Used to monitor the status of each dwelling throughout collection (Canada Post, internet submissions, Data Operations Centre and NRFU) and processing
- Provided daily updates to the Management Information System (MIS) for “almost real-time” reporting on progress of operations



Behind the scene

Wave Model

- Needed tools for planning and monitoring purposes
 - Making reasonable assumptions about take-up rates is paramount
- Two types of models used in 2016: static & dynamic
- Static:
 - Main uses – provided the planned daily and cumulative volumetrics for printing, collection and processing
 - Predicted, given assumptions before collection started, responses by day and by channel
 - Started with Address Register projections of dwelling counts on Census day, then daily return estimates based on daily returns from Census 2011, Census Content Test data and guesstimates

Behind the scene

Collection Management Portal (CMP)

- New Integrated Collection and Operation System (ICOS) being developed for all survey programs
 - Single multi-mode, multi-site, generic and integrated collection environment.
 - Common collection platform for all programs and surveys
 - Unique portal for all collection users (respondents, interviewers, collection managers, etc.)
- Multi-modal collection operations require that timely information be provided to enumerators so that they don't visit households that have already responded.



Online Questionnaire

- Several factors have led Statistics Canada to use the online questionnaire for the Census.
- Why?
 - Improve cost effectiveness
 - Improve timeliness
 - Reduce respondent burden
 - Maintain coverage, relevance and a high level of data quality
 - Reduce reliance on paper



Example: Better coverage - additional screening questions

- Paper:
 - Step B: Including yourself, how many persons **usually** live at this address on May 10th, 2016? (include persons temporarily away)
 - Short instructions on who to include in step B provided on questionnaire
 - Step C: Did you leave any one out of step B because you were not sure...?
 - If yes, Failed-Edit Follow-up by telephone is done
- Internet:
 - Including yourself, how many persons **are staying** at this address on May 10th, 2016? (include persons temporarily away)
 - Followed-up by additional screening questions (including Step C above), with detailed Help screens – No Failed-Edit Follow-up required
- If household size = 0, screening questions to derive the dwelling status



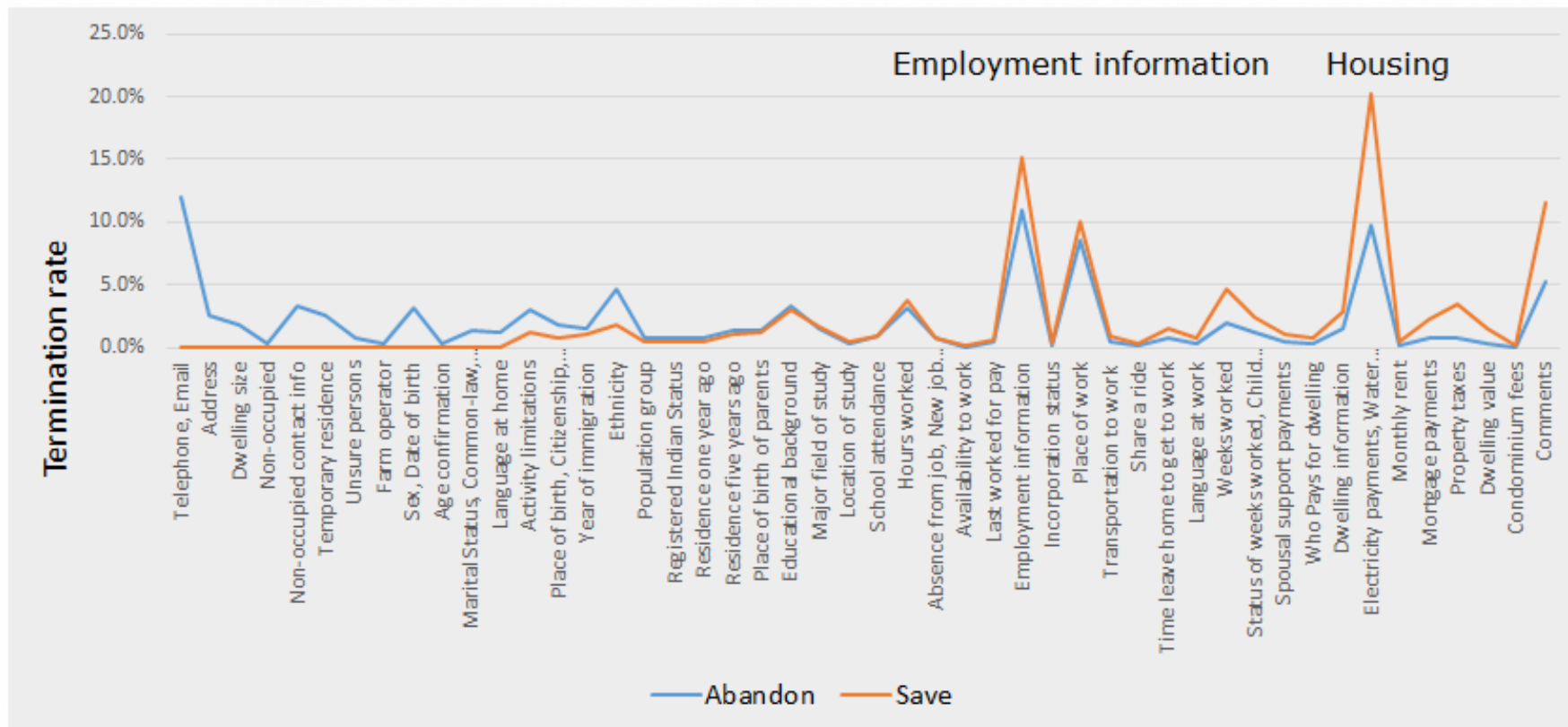
Impact on Item Non-response rates

- Hard edits on some questions
- Soft edits on most questions
 - i.e. most questions cannot be left blank without a message asking to complete the question being displayed

Question	Self-Response PAPER	Self-Response INTERNET
Q02_Sex	1.1	0.0
Q03_Age	0.5	0.0
Q04_Marital status	1.9	0.0
Q05_Common law	6.5	0.3
Q06_R2P1	1.8	0.1
Q07_Knowl. Off. Lang.	3.0	0.1
Q08a_Langu. home often	3.7	0.1
Q08b_Langu. home regular	3.9	0.1
Q09_Mother tongue	3.6	0.1
Q10_92years	6.1	0.8

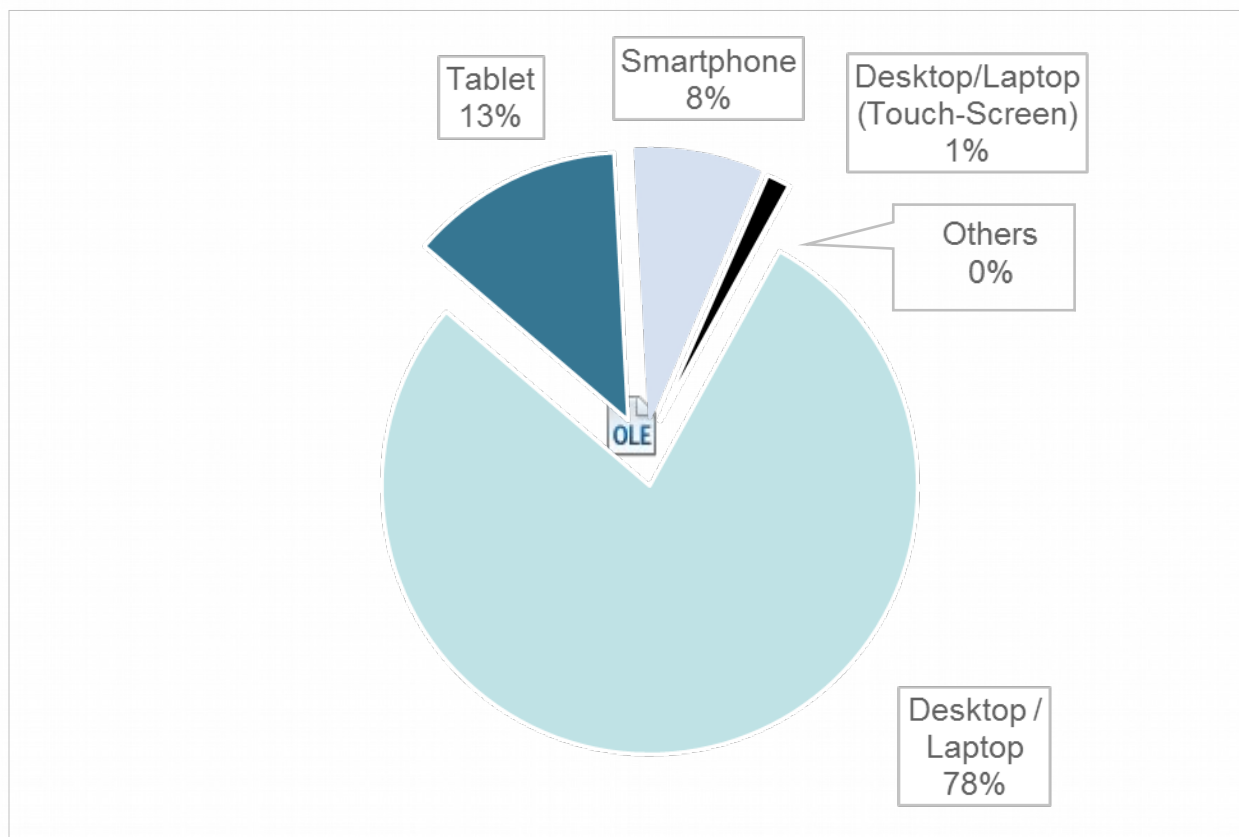


Pages where respondents abandoned or saved (Long form)

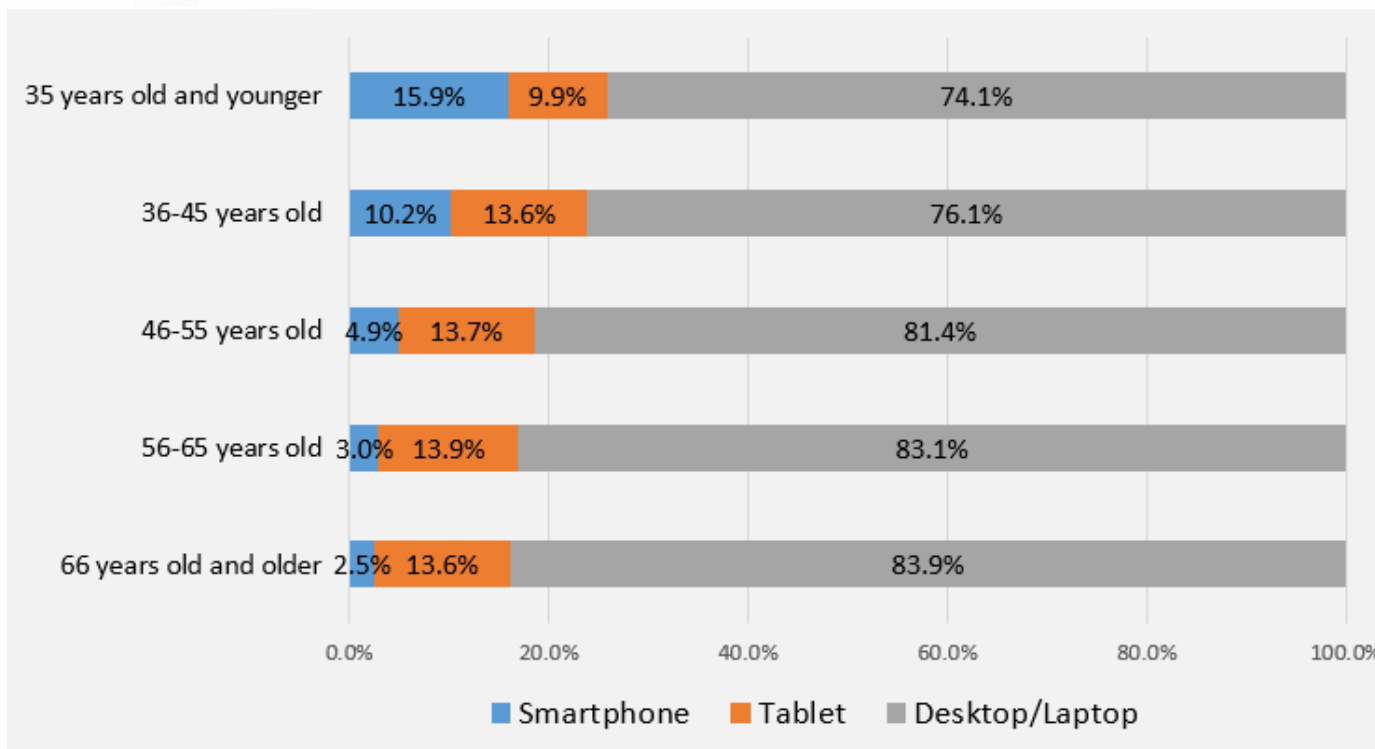


People most often abandoned or saved the questionnaire when asked about Employment or Housing (bills).

Analysis of Paradata: Internet responses by device category

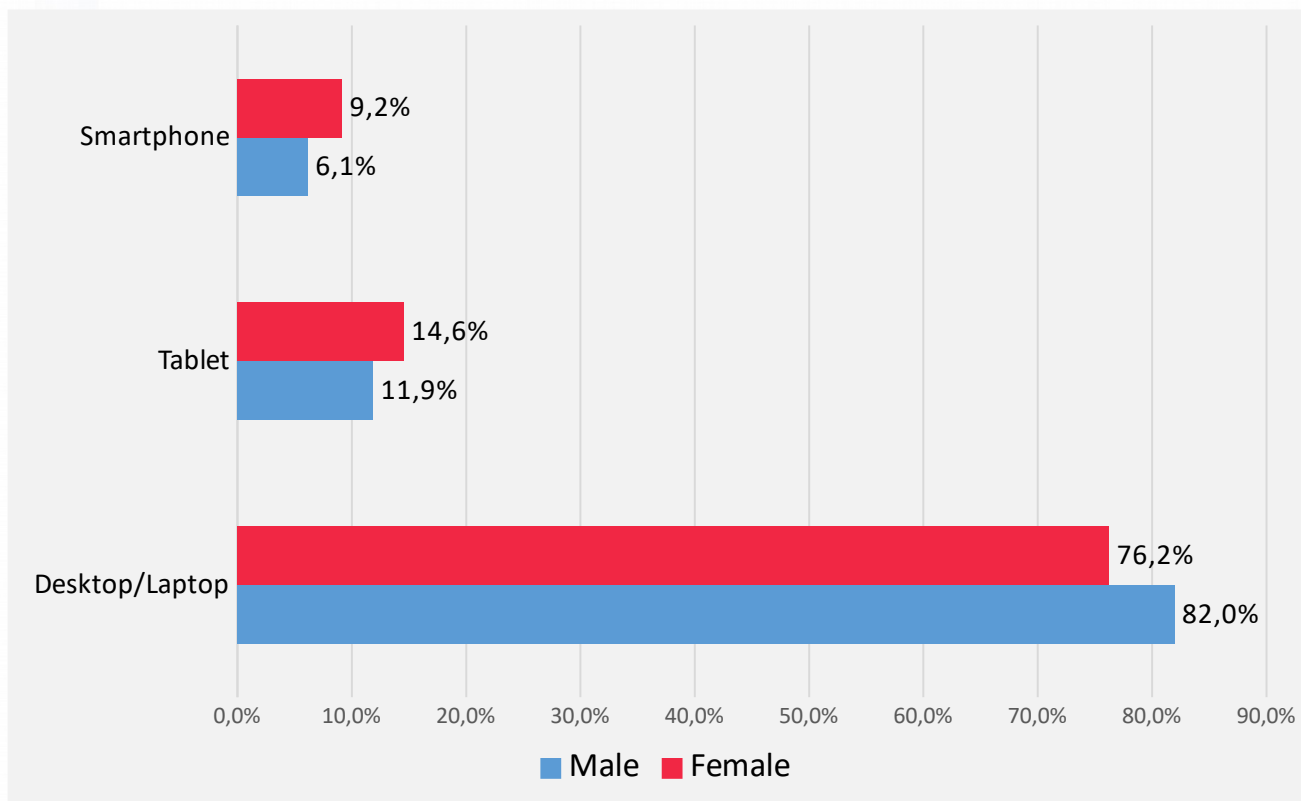


Profile — Device type by Age



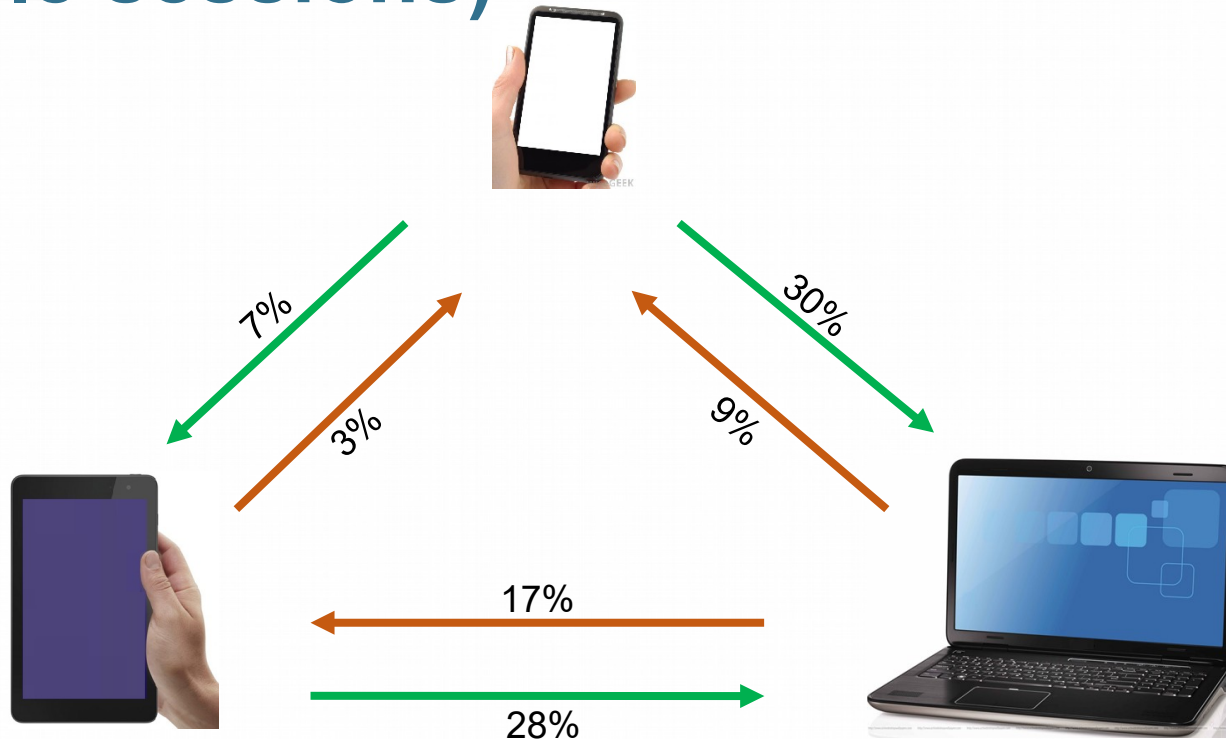
Smartphones were more popular than tablets with the younger population.

Profile — Device type by Sex



Tablets & smartphones were more popular with women than with men.

Switching devices in the long form (multiple sessions)



People are more likely to switch from a smaller device to a larger device.

Analysis of Paradata: Multiple sessions

Respondent's pattern in the Short-form (2A)

	Pattern	%
One Session	Login – Submit	94.17
	Login – Abandon	1.11
Multiple Sessions	Login – Submit	4.15
	Login – Abandon	0.57
		100

} **1.68%**

Respondent's pattern in the Long-form (2A-L)

	Pattern	%
One Session	Login – Submit	73.38
	Login – Abandon	2.48
Multiple Sessions	Login – Submit	20.68
	Login – Abandon	3.46
		100



Towards 2021 and 2026

- Expand mail-out in list/leave areas - Mail-out with drop-off
- Reduce the amount of paper we use
 - Invitation letter in List/Leave areas ?
 - Questionnaire package at Wave 3 ?
 - Encourage respondents to complete questionnaire online instead of requesting a paper questionnaire
- More targeted Communication and media strategy
- Continue paradata analysis
- Expand use of administrative data – Combined Census in 2026



To conclude...

- Two quotations from Don Dillman:

“The history of surveying over the last 75 years has involved significant transitions from the dominance of in-person interviews, to heavy reliance on voice telephone methods, and now to online and mixed mode surveys”

“We are now in an era of tailored design...”



To conclude...

- One quotation from Patrice Mathieu:

“A one-size fits all solution is becoming outdated for an increasing portion of the population. We have to follow the trend, but we cannot leave anybody behind.”



Obrigado

- Para obter mais informações, contacte:
- For more information, please contact:
- Pour plus d'information, veuillez contacter:

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