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Innovative approaches for 2021 Canadian Census and beyond



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Outline

- Introduction to Canadian Census
- Census Program Transformation Project (CPTP)
- Use of the Combined Census
- Using Statistical Registers for the 2021 Census
- Reduction of Over-Coverage
- Dwelling Occupancy Status
- Stop follow-up on non-responding dwellings



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Canadian Census

- Statistics Canada is responsible under the *Statistics Act* to conduct the Census of the Population every five years. The next census will be in 2021.
- The Census consist of :
 - Short questionnaires for collection of basic demographic information
 - Long questionnaires for detailed information on households – 25% sample
- The program relies on a *combined approach*; most data collected from households and some information obtained from administrative records such as income variables
- The success of the 2016 Census was highly dependent on the use of the wave methodology, which relies on reaching dwellings by mail



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Census Program Transformation Project (CPTP)

- The project has a double mandate:
 - 1) Creation of a Statistical Register Infrastructure (SRI)
 - Statistical Population Register (SPR)
 - Provides a continuously updated list of people residing in Canada, along with basic demographic characteristics (age, sex at birth, place of residence etc.)
 - Statistical Building Register (SBgR)
 - Is the evolution of Statistics Canada's Address Register (AR)
 - Provides an accurate list of all buildings in Canada, including collective dwellings, occupied and non-occupied private dwellings and non-residential buildings



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Census Program Transformation Project (CPTP)

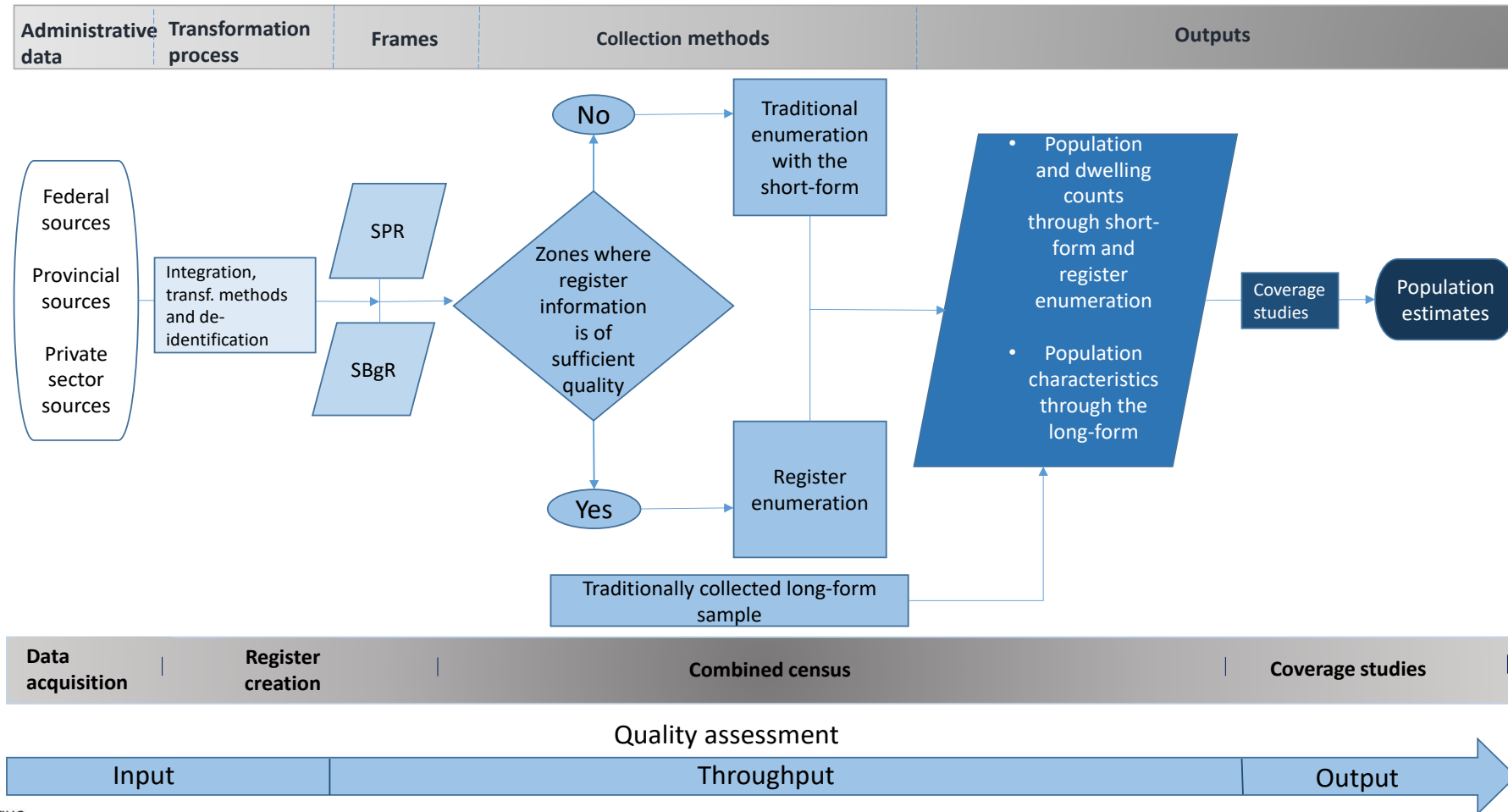
2) Research the expansion of a Combined Census approach

- Short-form questionnaire
 - Use of information from Statistical Registers where data is of sufficient quality from SPR and SBgR
 - Traditional enumeration where the information in the register is not deemed of sufficient quality or precision
- Long-form questionnaire
 - Representative sample of dwellings will be selected to provide detailed characteristics as conducted in the current model



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Combined Census: Sources of Administrative Data





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Using Statistical Registers for the 2021 Census

- For the 2021 Census of Population Program, Statistics Canada will largely reuse and repeat the approaches successfully implemented for the 2016 Program
- The largest potential for new efficiencies of the existing census approach is to take advantage of the new Statistical Registers to reduce non-response follow-up
 - Reduce over-coverage of the Census Frame from 4.5% to 3.5%
 - Predict dwellings occupancy status
 - Stop follow-up of some non-responding cases and use data from the SPR



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Reduction of Over-Coverage of the Census Frame

- Reduction of over coverage will be largely realized through matches to various administrative files
- Majority of updates to the AR are done using administrative sources
- One of the methods being developed to update the AR is identifying duplicate records on the file pointing to the same dwelling
 - Other internal methods have been developed to fine-tune matching and reconciliation processes to minimize address visioning.



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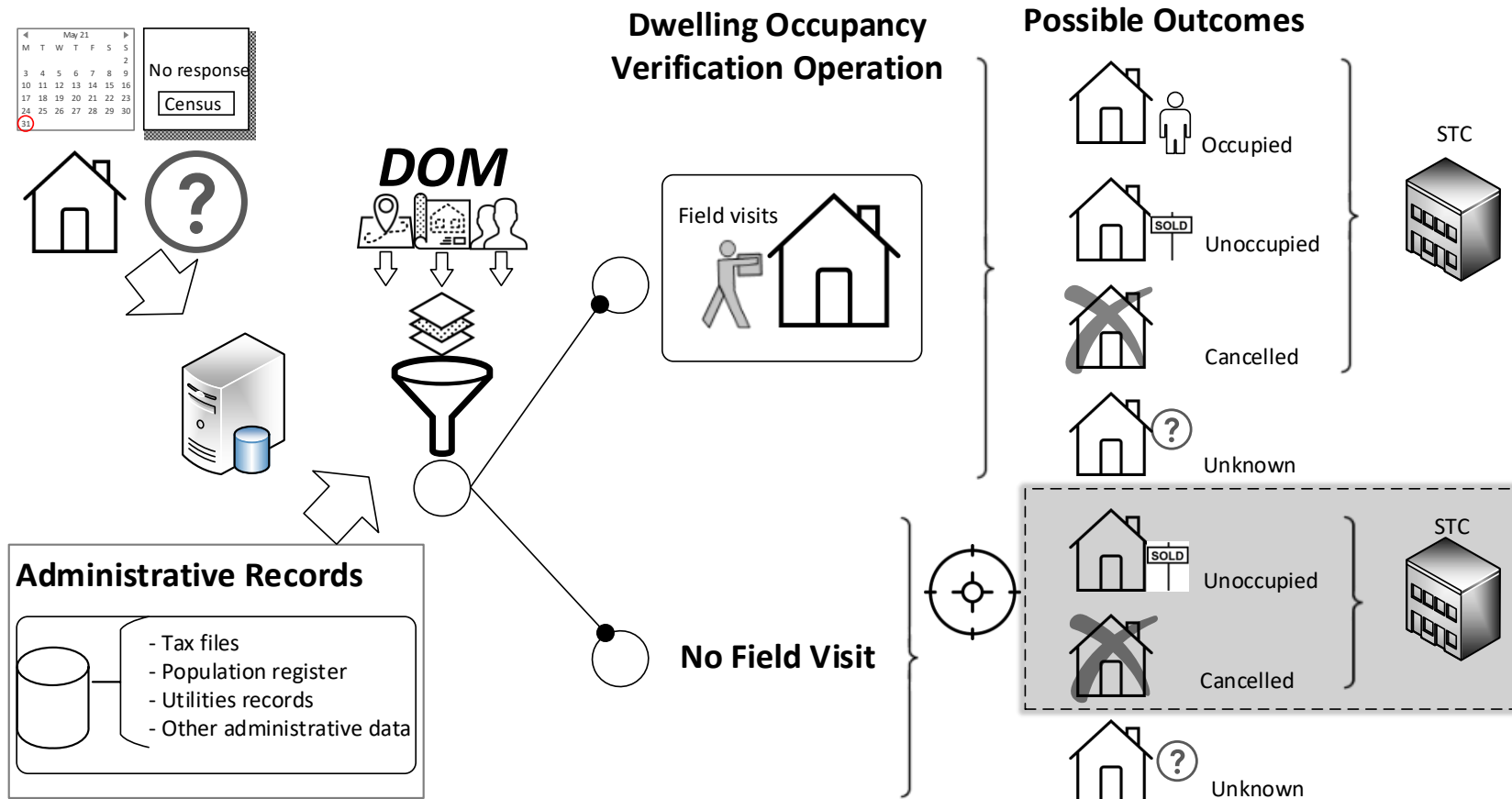
Predicting Dwelling Occupancy Status

- Dwelling Occupancy Model (DOM) is developed to predict the occupancy status of each dwelling
 - Depending on the performance of the DOM, new treatments could be applied prior to defining the DOV sample such as removing or reducing field visits at the time of Non-Response Follow-Up (NRFU) operation
- The Dwelling Occupancy Verification (DOV) operation aims to identify vacant and cancelled dwellings, as close to Census day as possible, and will rely on the DOM which is using new administrative data sources
 - Dwellings with high probabilities of being unoccupied or cancelled will be in scope for the DOV which is verified by field staff



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Dwelling Occupancy Model (DOM)





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Stop Follow-up on Non-Responding Dwellings

- Current NRFU strategy is to continue making attempts until a minimum response level of 98% for each of the approximately 45,000 collection units is obtained
- A predetermined maximum number of dwellings per collection unit in areas where high effort has already been expended will be stopped during the NRFU operation
- Criteria used to identify dwellings will include :
 - the high probability of being occupied from DOM
 - the dwelling not being part of the long-form questionnaire sample
 - the relative quality of the SPR record
- SPR data will be used as a proxy response for these dwellings



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Questions?

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