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Implementation of Responsive Design (RD) for CATI Surveys at Statistics Canada

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Outline

- Introduction
- RD Pilot Surveys
- Overall Responsive Design Strategy
- Responsive Design for HES
 - ◆ Active Management
- Highlights and Lessons Learned



Introduction



- ❑ Responsive Design (RD) is an adaptive approach that uses the information available prior and during data collection to adjust collection strategy for the remaining in-progress cases

- ❑ Trade-off between quality, cost, productivity, responding potential of in-progress cases, survey mode and interaction between surveys

RD Pilot Surveys



□ Two experiments

- ◆ Households and the Environment Survey (HES)
 - Collection: October to November 2009 - 8 weeks
 - Focus of the presentation
- ◆ Survey of Labour and Income Dynamics (SLID)
 - Collection: January to March 2010 – 11 weeks

□ HES 2009

- ◆ Measures the environmental practices and behaviours
- ◆ Dwelling survey with a cross-sectional design
- ◆ Canadian Community Health Survey (CCHS 2009) sampling frame (n= 20,000 units)
- ◆ National, provincial and urban\rural estimates

Overall RD Strategy



1) Planning

- ◆ Analysis of previous data collection cycle
- ◆ Data collection phases and strategies (Including staffing plans and propensity model)
- ◆ Sample validation
- ◆ Active management tools and reports
 - New key indicators and communication plan
- ◆ Control groups (to assess RD impact)

2) Initial data collection phase

- ◆ Use strategic improvement opportunities previously identified (e.g. new time slice strategy and intermediate cap)
- ◆ More likely easy cases
- ◆ Monitor key indicators to identify start of RD phase-in 1
 - Response rate, productivity, cost (proportion of budget spent) and responding potential of in-progress cases

Overall RD Strategy



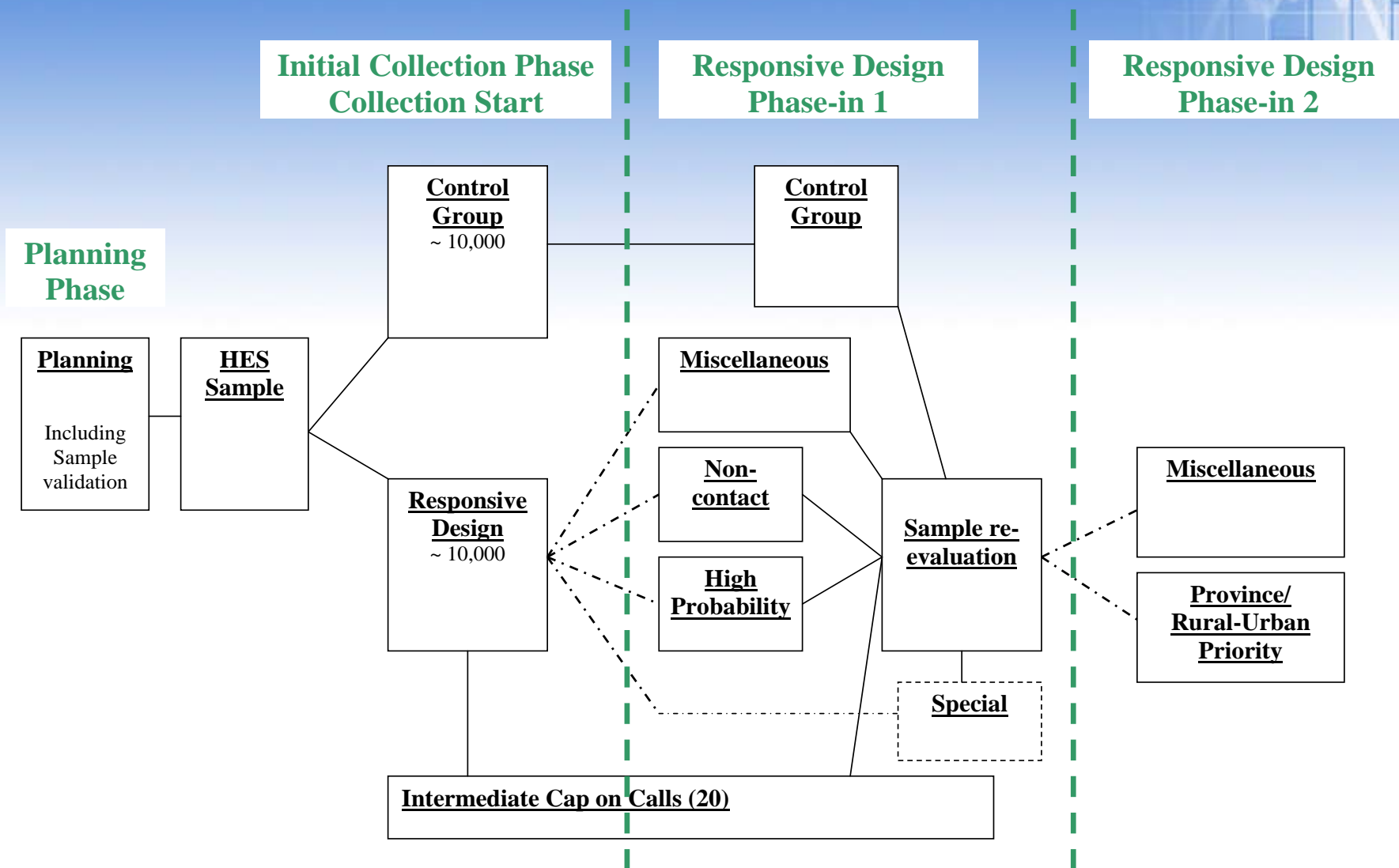
3) Responsive Design phase-in 1 - Daily overnight job

- ◆ Categorize and prioritize cases to improve overall response rates
 - Probability of completion (propensity) – logistic regression model (sampling frame and sequence of calls information)
- ◆ Monitor key indicators to identify start of RD phase-in 2
 - R-indicator and previous key indicators

4) Responsive Design phase-in 2 - Daily overnight job

- ◆ Prioritize cases to improve sample representativity
 - Priority to domain of interest with lower response rates
 - National versus regional objectives

RD Strategy for HES



Active Management for RD

□ Data sources used

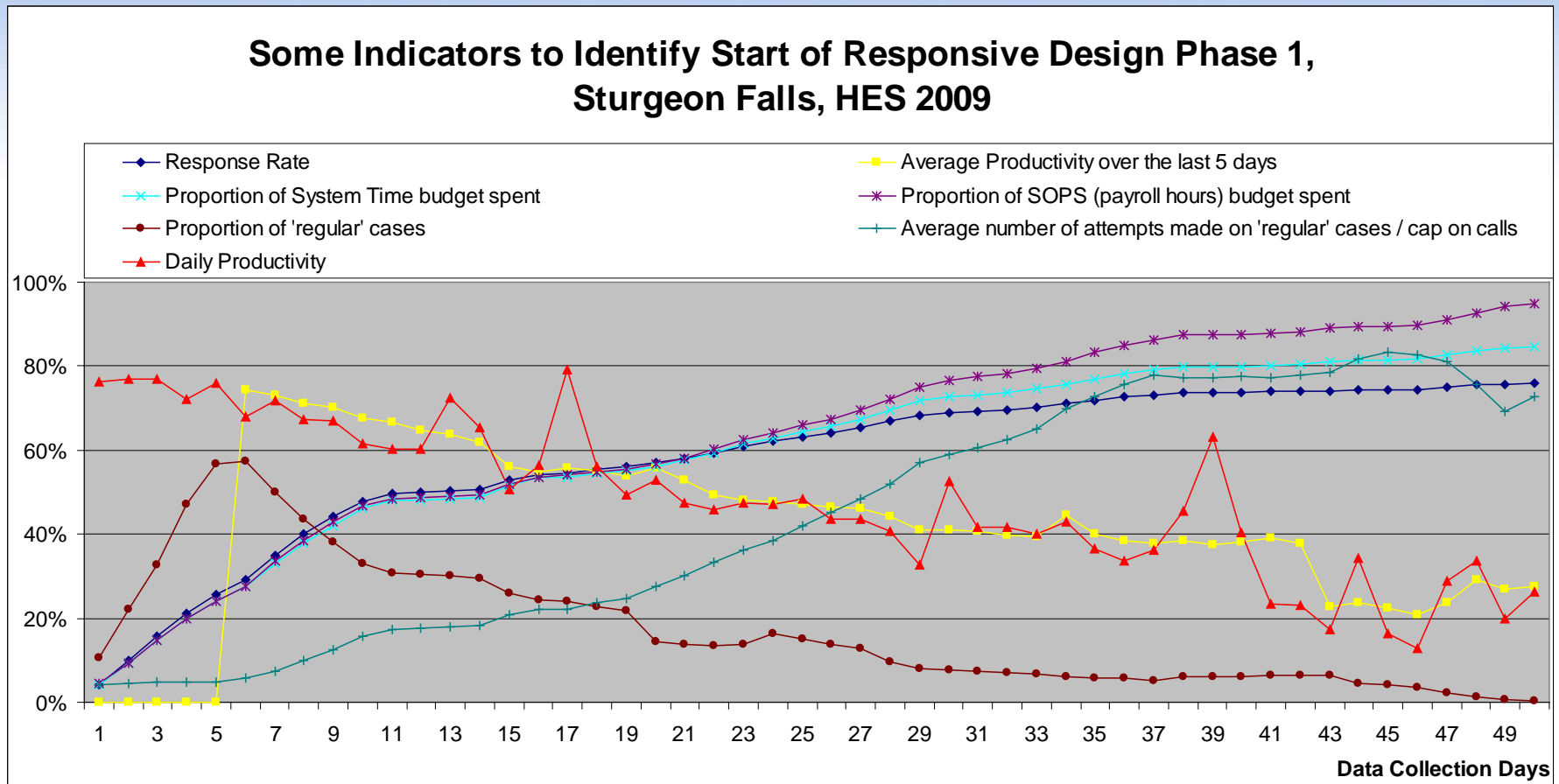
- ◆ BTH
- ◆ Interviewer payroll hours
- ◆ Budget and target figures
- ◆ Previous (e.g. final responding status, # of calls) and current (e.g. demographic and sample design) collection cycle information
- ◆ Propensity model results

□ Key indicators

- ◆ Response rate, R-indicator, cost, budget, productivity, responding potential of in-progress cases
- Used to identify when to start RD Phase-in 1 and 2
- No survey estimates monitoring so far

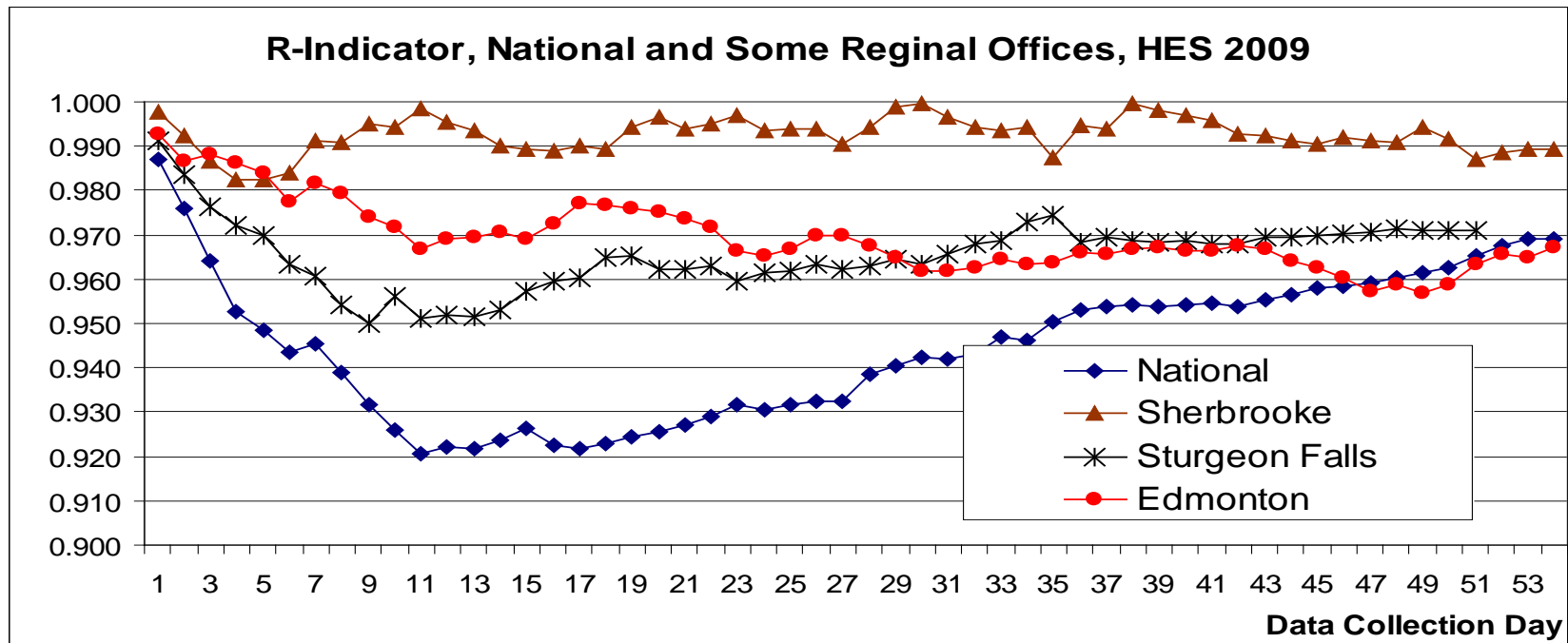
When RD Phase-in 1?

- Phase 1 decision based on survey progress in terms of response rate, productivity, budget spent (cost) and response propensity



When RD Phase-in 2?

- Decision based on previous graph and R-indicators
 - R-indicator is a measure of variability of response rates between domains of interest
 - National versus regional objectives
- Dashboards are used to identify when to start both RD phases to facilitate interpretation and make objective decision



Highlights



- ❑ Response rates: RD: 74%, Control Group (CG) 74.1%
 - ◆ Higher proportion of difficult cases in RD groups
 - ◆ RD achieved same response rate with less effort
 - ◆ More homogenous distribution of calls for RD group
- ❑ Sample representativity improved in 2009
- ❑ Prioritization and categorization of cases had positive impact
 - ◆ Except Special Group
- ❑ New Time Slices has no real impact
 - ◆ More investigations required
- ❑ Intermediate Cap on Calls
 - ◆ 6.9% (CG) and 2.9% (RD) of cases reached the Cap of 25 calls
 - ◆ Effort on cases in intermediate cap need to be better monitored

Other Lessons Learned



- ❑ Pilot test demonstrated the technical feasibility of RD strategy
 - ◆ RO also showed their ability and capacity to handle RD
- ❑ RD concept and technical issues
 - ◆ Few minor conceptual RD adjustments for SLID 2010
 - ◆ Find technical problems earlier in the process
- ❑ Active Management
 - ◆ Essential for any RD-require a significant amount of effort to develop
- ❑ Communication
 - ◆ Required on-going and well planned communication
- ❑ Staff
 - ◆ New analytical skills required
 - ◆ Interviewer staffing in RO's-required guidelines to staff between groups



For more information, please contact
Pour plus d'information, veuillez contacter

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