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# Framework to assess the “maximum” expected response rate for different survey designs and field conditions

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# Background



- ❑ There are many external and internal factors that might impact response rates before and during data collection. For some of these factors, data collection organizations have
  - ◆ No direct responsibility
  - ◆ Shared responsibility
  - ◆ Primary responsibility (especially during collection)
  
- ❑ Before collection starts, there is a “maximum” response rate that can be achieved given all the factors for which collection units within statistical organizations have no direct or shared responsibility
  
- ❑ The main objective of data collection units is to draw near to this “maximum response” achievable rate (but unknown) using the best data collection strategies and practices

# Factors impacting response rates



□ Factors for which data collection units (DCU's) have

- No direct responsibility (Red Boxes)
- Shared responsibility (Yellow Boxes)
- Primary responsibility (Green Boxes)

➤ Before and During Data Collection

Before Collection			During Collection	
Nature of the survey (1)	Survey frame (1)	Sample design (1)	Active Management (3)	
Questionnaire content and length (1)	Collection modes (CATI/CAPI/EQ) (1)	Operational constraints & external factors (1)	Responsive / adaptive design (3)	
Budget (2)	Data collection strategy (2)	Length of collection period (2)		
Predetermined collection rules (2)	Survey planning (e.g., assumptions, targets and concurrent surveys) (3)	Production plan (e.g., work intensity) (3)	Number of concurrent surveys (3)	High quality survey procedures (3)
Interviewer / respondent material (3)	Plan responsive / adaptive design and active management tools (3)	Plan for high quality of survey procedures (3)	Work intensity and interviewer assignment (3)	

# Before data collection

## Factors for which DCU's have no direct responsibility

### □ Intrinsic nature of the survey

- ◆ Topic and survey objective(s)
- ◆ Type of survey: ongoing, regular or occasional (including first time survey)
- ◆ Characteristics of the target population
- ◆ Status of the survey (voluntary / mandatory)
- ◆ Use of incentives

### □ Survey frame(s)

- ◆ Quality and timeliness of the contact information including the number of contact information sources
- ◆ Type and characteristics of the frame (s) (e.g., phone and/or dwelling frames)
- ◆ Composition of the frame (e.g., cellular versus land line)
- ◆ *The type of frame available is often the main driver for the choice of a given collection strategy along with the budget.*



# Before data collection

## Factors for which DCU's have no direct responsibility

### ❑ Sample design

- ◆ Sample size and expected quality of estimates
- ◆ Stratification and sample allocation (e.g., proportion of cases in more difficult regions or in more difficult to reach populations, oversampling of immigrants)
- ◆ Rostering and random selection of respondent

### ❑ Questionnaire content and length

- ◆ Complexity of concepts and definitions
- ◆ Length of the questionnaire / Respondent burden

### ❑ Collection modes

- ◆ Response rates can greatly vary by collection mode (CATI\CAPI\Web or mixed-mode)

### ❑ Operational constraints

- ◆ Interviewers' unionization and interviewing workload capacity
- ◆ The communication flow with collection field staff

### ❑ External factors

- ◆ Increased privacy concerns, growth in number of public opinion research surveys and telemarketing calls, increased use of telephone call display technologies for screening calls, increased proportion of households with only cellular phones

# Before data collection

## Factors for which DCU's have shared responsibility

### □ Budget

- ◆ Resources are fixed and limited

### □ Length of collection period

- ◆ The timing of the collection strategy is based on many factors for which data collection has little control as well as the capacity of field operations

### □ Data collection strategy

- ◆ Collection partners before the start of survey development agree upon the parameters defined in the collection strategy

### □ Pre-determined collection rules

- ◆ By pre-determined collection rules and strategy, we mean for example, pre-contact strategy, cap on calls, routing tables (e.g. rules to escalate cases to the next group and level) are generally fixed before collection starts.

# Before data collection

## Factors for which DCU's have the primary responsibility

### □ Survey planning

- ◆ Determine realistic survey assumptions and targets. In practice, the targeted response rate should be close to the maximum response rate.
- ◆ Evaluate collection capacity for the targeted collection period in taking into account all concurrent surveys in the field.

### □ Production plan - Plan for work intensity and interviewer allocation

- ◆ Determine the milestones and plan to monitor survey progress
- ◆ Work intensity, interviewer allocation along with responsive collection design (RCD) and active management, are the main factors for which data collection units have more control during collection

### □ Interviewer material, training, experience and motivation

# Before data collection

## Factors for which DCU's have the primary responsibility

### □ Respondent relations material

- ◆ For example, invitation letters, survey introduction, text message, refusal conversion letter, documentation to help interviewers convince reluctant respondents, question and answer module on website, brochure, etc.

### □ Plan responsive/adaptive designs and active management tools

- ◆ Especially for surveys at risk

### □ Plan for high quality survey procedures, e.g.

- ◆ Efficient refusal conversion strategy, sending refusal conversion letter at the right moment after the first refusal, interviewer assignment in the best time to call period, interviewer assignment that takes into account efficiency on type of cases



# During data collection



Factors for which DCU's have the primary responsibility

# During data collection

## Factors for which DCU's have the primary responsibility

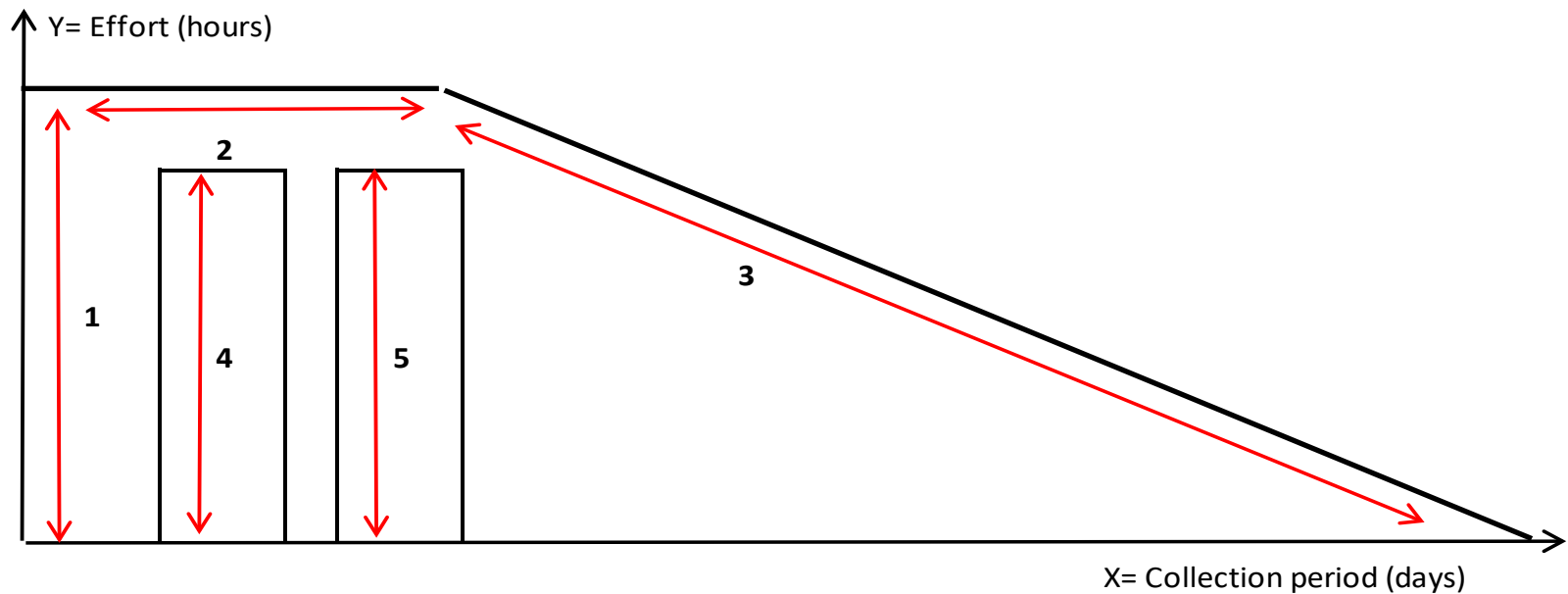
- Responsive design and active management
  - ◆ Take advantage of information available before and during collection to
  - ◆ Adjust collection strategy for the remaining in-progress cases
  
- Number of concurrent surveys
  - ◆ If the workload is larger than the data collection capacity, the collection effort would be reduced for some surveys which will result in a decrease in the response rate.
  
- Use high quality survey procedures
  - ◆ For example, the success of the refusal conversion strategy has an important impact on the final observed response rate. For some surveys, the refusal conversion rate is in the 25% to 30% range, adding more than 12 percentage points to the overall response rate.

# During data collection

## Factors for which DCU's have the primary responsibility

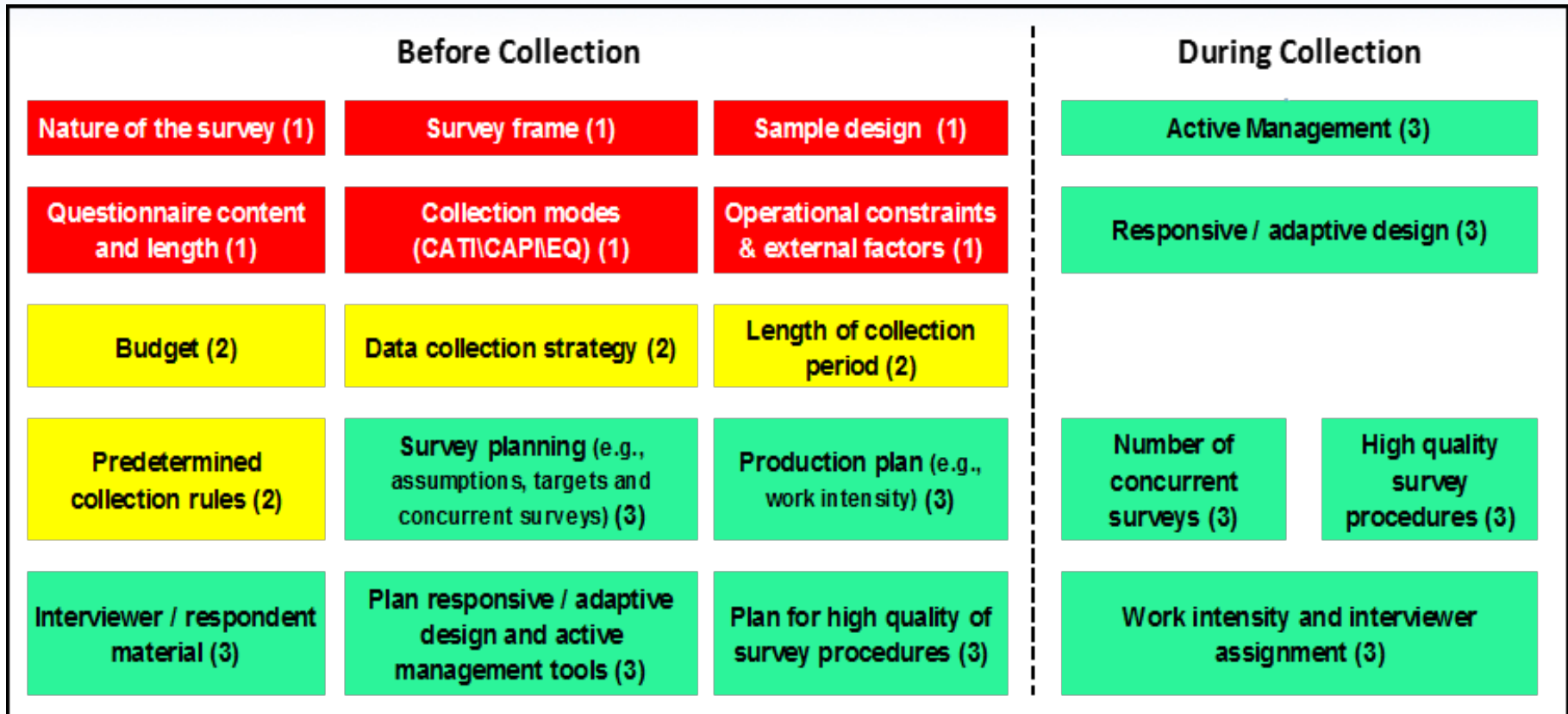
### □ Interviewer allocation and scheduling

- ◆ At which level of intensity should we start collection (Front loading) (1)
- ◆ How long should the intensity be maintained? (2)
- ◆ At which pace/rhythm should we reduce this intensity (function) to take advantage of the whole collection period (3)?
- ◆ During collection, how can we better align workload and staffing effort across groups (e.g. regular, refusal and special) (4)?
- ◆ During collection, what should the proportion of collection effort between day and night shifts be (5)?



# Factors impacting response rates - summary

- If one of these generally fixed factors that impact response rate before collection is changed for any reasons during collection period (e.g. increase of survey budget, survey incentives or length of collection), this will possibly change the maximum response rate
- The main objective of data collection units is to achieve response rates that are as close as possible to the maximum response rate using the best possible practices before and during collection



# “Maximum” attainable response rate

- ❑ Before collection starts, there is a “maximum” achievable response rate that can be achieved given all the factors for which collection units within organizations have no direct or shared responsibility e.g.
  - ◆ Different target response rates by RO
    - Different frame composition by RO (e.g. different % of cellular phones for surveys that used the common household frame)
  - ◆ Different target response rates by health region (CCHS)
    - Different population (e.g. 55% (York region-ON) vs 75% (Fredericton - NB))
  - ◆ European Social Survey
    - Same target response rate by country with same survey instrument
    - Different frame, sample design and collection strategy
    - Is it realistic to target the same response rate for all countries?
- One of the main challenges in that context is to be able to assess if the same amount and the same quality of effort (e.g. good distribution of resources)



# Maximum and achieved response rates versus Data Collection Performance (DCP)



□ Is it possible to link these two concepts

- ◆  $M$  = Maximum response rate
- ◆  $O$  = Observed response rate
- ◆  $DCP = 1 - ((M - O) / M)$  and then  $M = O / DCP$
- In theory, we can then try to estimate either DCP or  $M$

□ Let's take two Countries

◆ Country A:

- 52% : achieved response rate vs 55%: maximum resp. rate
- Difference of 3 percentage points or 5.5% of the maximum resp. rate

◆ Country B

- 70% : achieved response rate vs 80%: maximum resp. rate
- Difference of 10 percentage points or 12.5% of the maximum resp. rate

➤ **Best response rate: Country B**

➤ **Best collection performance: Country A**

# Data Collection Performance Indicator - Some thoughts for future work

- ❑ In practice, the question is: *Is it possible to develop such a Data Collection Performance Indicator?*
  
- ❑ In addition, this indicator needs :
  - ◆ To be objective and coherent;
  - ◆ To be fair across survey's and RO's;
  - ◆ To be easily understood and interpreted;
  - ◆ To take into account the effort and the results.
  
- Realistic or impossible to project?

# Conclusion

- ❑ The choice made at the sample design stage (factors for which we have no direct or share responsibility) before the data collection period pre-determined a “maximum reachable response rate” that cannot be exceeded in theory, no matter what happens during collection
  
- ❑ The main objective of data collection is to achieve the maximum response rate using the best possible collection practices
  - ◆ Survey planning (e.g. assumptions, targets and budget) needs to be well defined as it has an impact on the collection outcome. For that component collection has some control
  - ◆ Providing field staff with training
    - Interviewer material and training needs to be taken into account because data collection has control on those aspects
  - ◆ Making efficient and strategic use of survey resources while in the field is an essential part of the process in order to achieve maximum response rates
    - Active monitoring, RCD, high quality survey procedures and interviewer guidelines are key aspects that are in control of collection



## English – my translation...

- ❑ Theory is when it's not working but we know why
- ❑ Practice is when it is working but, we don't know why
- ❑ When theory meets practice, it's not working and we don't know why

Bernard Werber



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