Statistics Canada Missing Link to True Multimode

Presentation to Fed CASIC 2010

Daniel Boucher

March 18th, 2010

Overview

- Current State

- Attempt at Multimode

- Drivers for Change

- Survey Master Control System

- Question(s)

Statistics Canada • Statistique Canada

Current State

Statistics Canada • Statistique Canada

Statistics Canada Surveys

- ## Characteristics

  - 386 surveys per year
  - Widely varying sample sizes
  - Business, social, institutional, agricultural
  - Interviewers and editors
  - Varied survey characteristics
  - Interaction with other systems

  - Multiple systems to process collected data
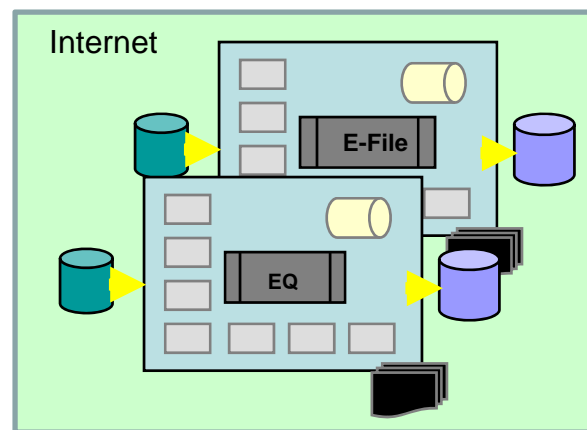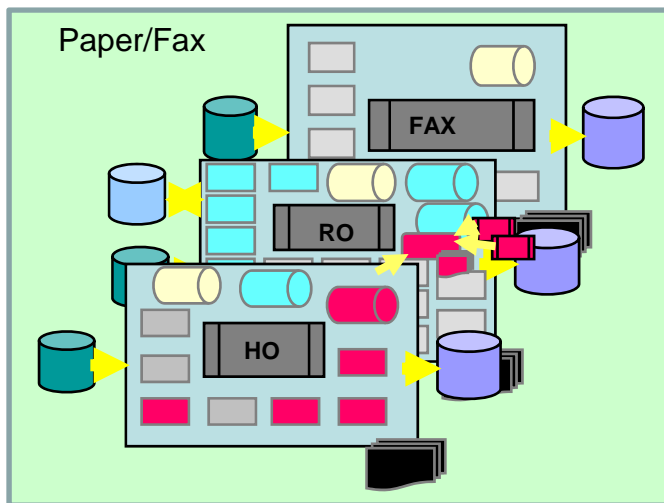 - Various communities with different collection strategy/ approach
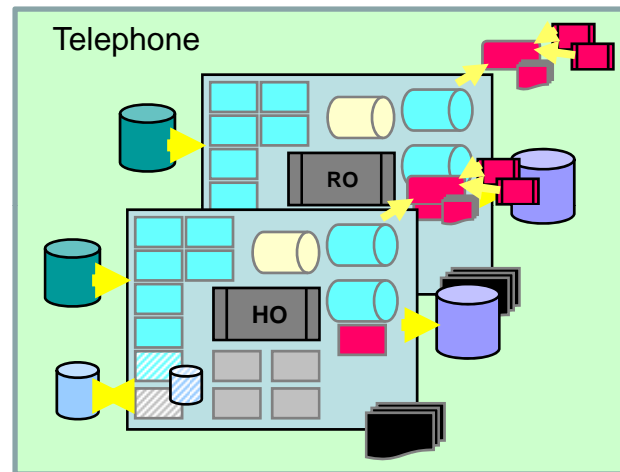
Current State of Collection

- Multiple modes of survey data collection:
  - Computer Assisted Telephone Interviewing (CATI)
  - Computer Assisted Personal Interviewing (CAPI)
  - Mail out / Mail back (Paper)
  - E-Questionnaire (Internet) **
  - E-File Transfer (Internet) **

- Multiple collection sites

** new service launched in 2009

Collection Systems

Computer

Telephone

Paper/Fax

Internet

Statistics Canada • Statistique Canada

Attempt at Multimode

Statistics Canada • Statistique Canada
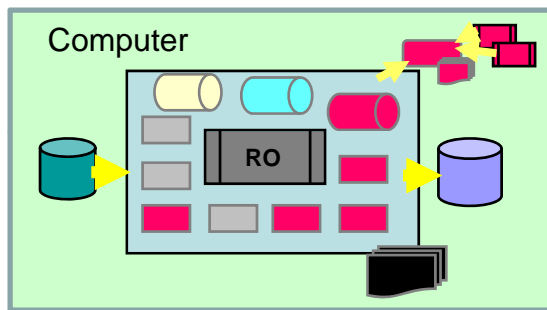
Current Solution to Multimode

- Business surveys

- Concurrent data collection via paper, fax and Internet

- All data integrated via CATI systems

- Most Non Response and Field Edits Follow up performed using CATI systems

- Collection data transferred to client divisions

Current Multimode Solution

Paper/Fax

Internet

Telephone for Follow Up

HO

EQ

HO

Client

Statistics Canada • Statistique Canada

01/04/2010

Drivers for Change

Statistics Canada • Statistique Canada
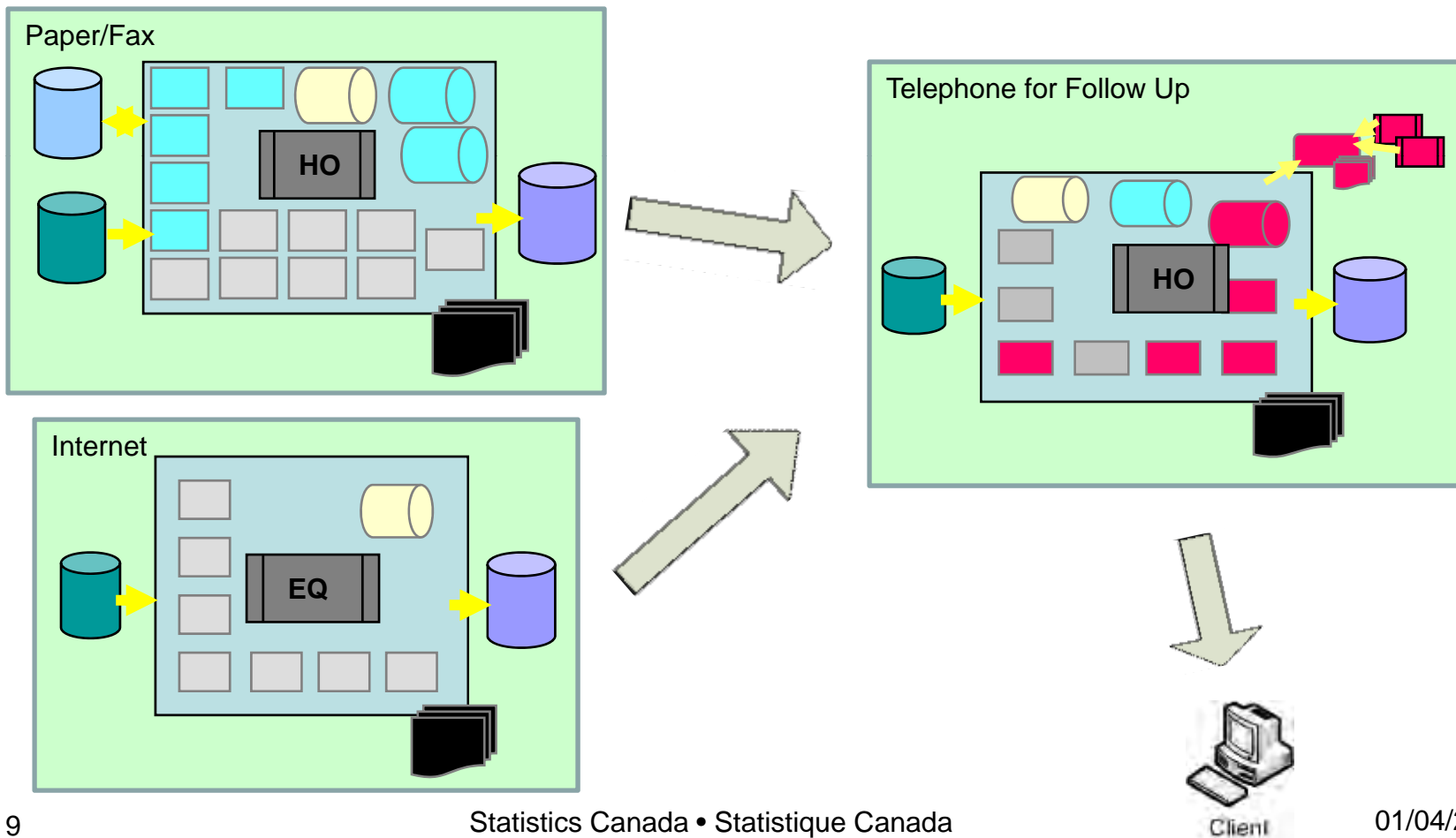
Current Multimode Limitation

- Current systems and modes are stove-piped and cannot exchange information easily

- Standardization has been along business line or collection modes

- Little support to manage of the overall "collection" effort
  - No single view of all modes of collection
  - Difficult to move cases between modes and/or collection sites

- No concept of a common repository for the data

- New modes have to adapt to legacy systems

Other Drivers for Change

- Collection Modernization Vision
  - Conduct collection in an integrated and flexible way
  - Be more responsive to clients and respondents requirements
  - Operate more efficiently
- Collection partners want:
  - better tools to actively manage collection
  - better management of non-responses
  - better business resumption capabilities
  - more flexible response options for respondents

Statistics Canada • Statistique Canada

Survey Master
Control System (SMCS)

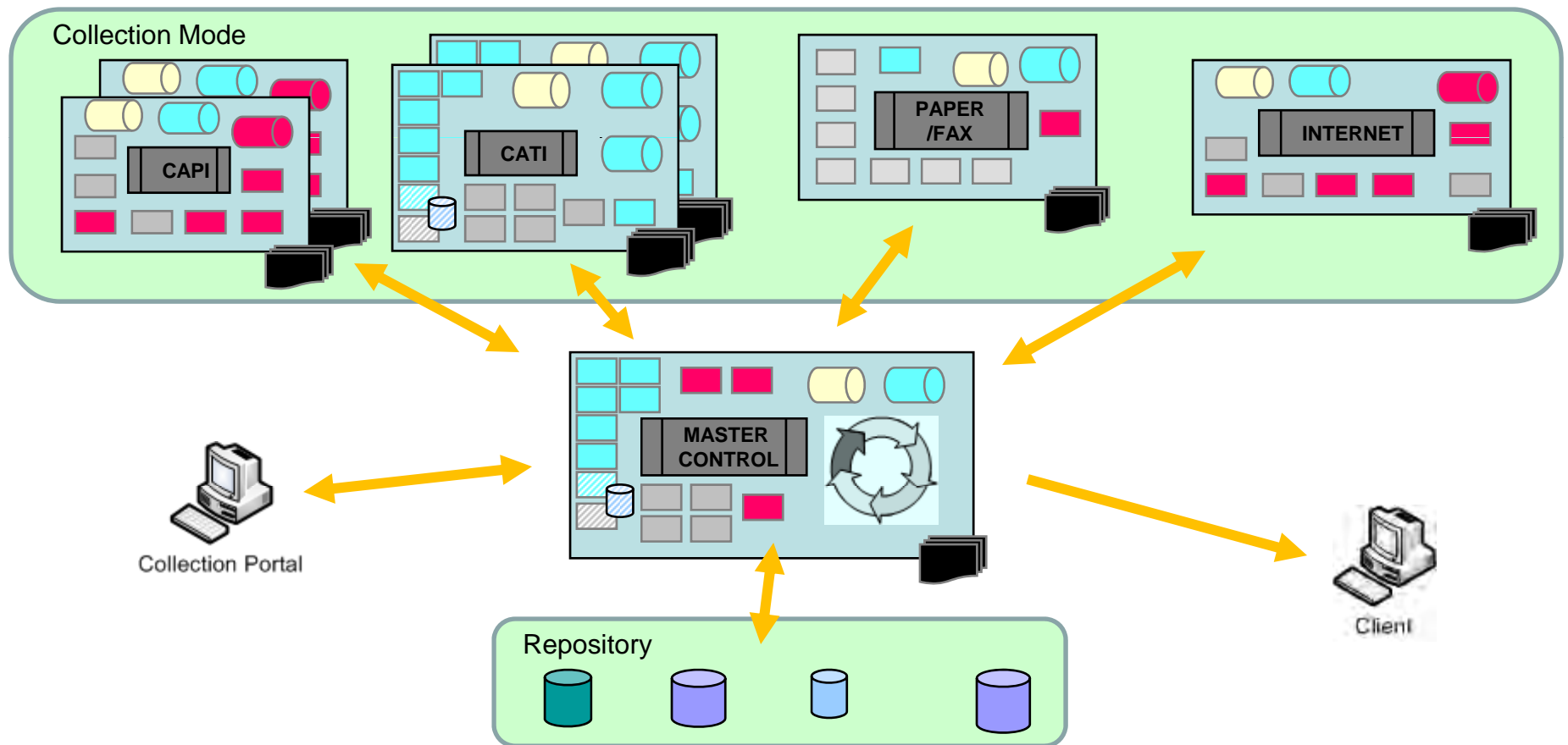Statistics Canada • Statistique Canada

SMCS Stakeholder Requests

- Move cases between modes and sites

- Common view of paradata

- Define rules for their surveys

- Security and permissions to control level of access by type of user

- Accept sample files in a standard format

- Single output file

- Track cases and keep audit records

Statistics Canada • Statistique Canada

SMCS Concepts

- Overarching survey master controller that:
  - Supports active management of the overall collection effort
  - Facilitates routing of cases among collection sites and modes
- Consolidated data repositories that:
  - Allows for up-to-date information for better decision making
  - Preserves historical paradata to facilitate research, collection planning
- Interfaces/Bridges that:
  - Preserve current investments in survey instruments
  - Result in minimal impact on clients
  - Provide a framework that enables new modes to be introduced easily

Statistics Canada • Statistique Canada

SMCS Diagram

Collection Mode

CAPI

CATI

PAPER/FAX

INTERNET

Collection Portal

MASTER CONTROL

Client

Repository

Statistics Canada • Statistique Canada

SMCS Features

- Survey and Cycle Management

- Sample File Management

- Collection (Case) Management

- Dashboard and Reports across modes and sites

- Collection System Administration

- Communication to Collection Applications in Modes and Sites

- Data Output to Client

Statistics Canada • Statistique Canada

SMCS Technology

- Service Oriented Architecture (SOA)

- Internet Information Services (IIS) 6.0

- Windows Communication Foundation (WCF)

- Microsoft .Net Framework 3.5

- SQL Server for database and business intelligence

- BizTalk Server for messaging and orchestration

- XML based (support ASCII for sample file)

- Architecture easily scalable and adaptable

Statistics Canada • Statistique Canada

SMCS Project

- Phase 1 (April, 2007 to July, 2010)
  - Highlights
    - Survey, Cycle, Sample File and Collection (Case) Management
    - Reports across modes and sites
    - CATI and CAPI modes Integration
    - Social and Agricultural surveys
    - Identified early adopters (CCHS & Ag)

- Phase 1b (January, 2010 to January, 2011)
  - Highlights
    - E-Questionnaire Integration
    - XML Data Structure and Exchange
    - Migration of other Social and Agriculture surveys

Statistics Canada • Statistique Canada

SMCS Project

- Phase 2 (August, 2010 to ???)
  - Highlights
    - Business surveys integration
    - Paper and fax modes integration
    - Generic workload assignment across modes and sites
    - Support for other collection support services such as Tracing, First Level Editing, Questionnaire Generation System, Data Transformation, etc.
    - Enhance reports and dashboard
    - Sample File from Corporate Frame Systems (i.e. Business Register)

Statistics Canada • Statistique Canada

SMCS Logical Architecture
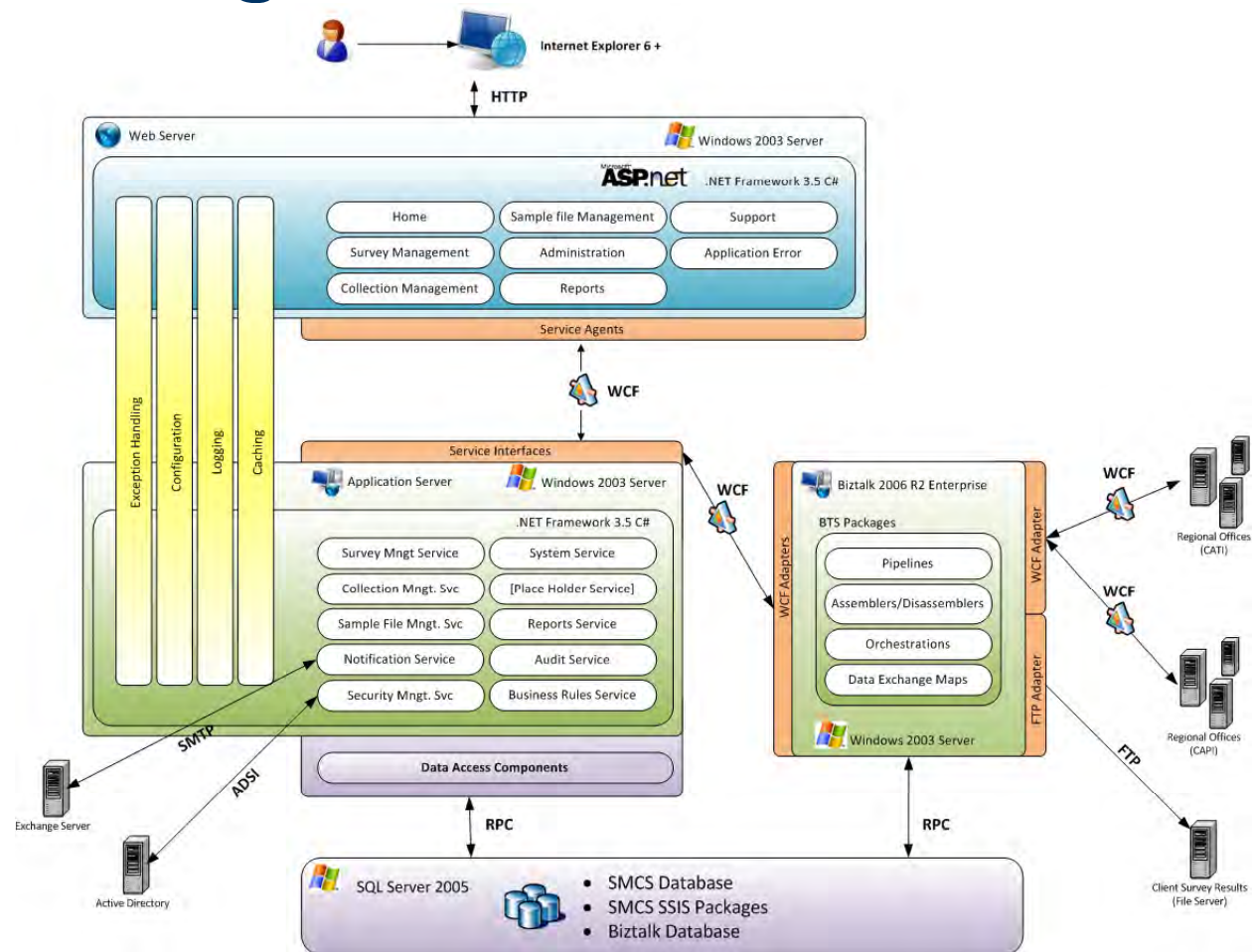
SMCS Screen Shots

Statistics Canada • Statistique Canada

〰 **SMCS**   🍁 Statistics Canada

français

Main Menu

Survey Management ⊗
Maintain Surveys
Maintain Survey Cycles
Maintain Survey Control Parameters
Maintain Location Mode Managers
Maintain Production Plan
Maintain Dispatch Rules
Approve Collection Systems

Sample File Management ⊗
Load Sample Validation File
Load Sample File
Validate Sample File
Unload Sample File
Approve Sample File
Approve Dummy Cases

Collection Managment ⊗
View Cases
Disable Cases From File

Administration ⊗
Maintain User Roles
View User Assignments
Maintain Modes
Maintain Sites
Maintain Rule Sets

🔷 Maintain Survey Cycles   ⓘ

Search for existing survey cycles

Survey Code: [＿＿＿＿＿]

Survey Acronym: [＿＿＿＿＿]   Survey Description: [＿＿＿＿＿＿＿＿＿]

Cycle Code: [＿＿＿＿＿]   Cycle Description: [＿＿＿＿＿＿＿＿＿]

[Search]   [Clear]

[Add New]

Survey Code	Survey Acronym	Survey Description	Cycle Code	Cycle Description	
8090	CCHS	CCHS	200901	End to End CAPI	✎ ✖

SMCS   🍁 Statistics Canada

français

Main Menu

Survey Management ⊠
Maintain Surveys
Maintain Survey Cycles
Maintain Survey Control Parameters
Maintain Location Mode Managers
Maintain Production Plan
Maintain Dispatch Rules
Approve Collection Systems

Sample File Management ⊠
Load Sample Validation File
Load Sample File
Validate Sample File
Unload Sample File
Approve Sample File
Approve Dummy Cases

Collection Managment ⊠
View Cases
Disable Cases From File

Administration ⊠
Maintain User Roles
View User Assignments
Maintain Modes
Maintain Sites
Maintain Rule Sets

Maintain Survey Control Parameters - Summary   ⓘ

Survey Cycle: CCHS - 200901

| Custodian & Client | Modes & Sites | Strata & Key Variables | Collection Targets |

Collection Start Date: 2009/08/05   Collection End Date: 2009/08/30

Mode \ Site \ 3rd Language Support	Start Date	End Date
CATI-RO	2009/08/04	2009/08/31
Winnipeg	2009/08/05	2009/08/30
Sherbrooke	2009/08/05	2009/08/30
CAPI	2009/08/04	2009/08/31
Halifax	2009/08/05	2009/08/30

Custodians and Clients Modes and Sites Strata and Key Variables Collection Targets

Approved   [Close]

SMCS

★ Statistics Canada

français

Main Menu

Survey Management ⊗
Maintain Surveys
Maintain Survey Cycles
Maintain Survey Control Parameters
Maintain Location Mode Managers
Maintain Production Plan
Maintain Dispatch Rules
Approve Collection Systems

Sample File Management ⊗
Load Sample Validation File
Load Sample File
Validate Sample File
Unload Sample File
Approve Sample File
Approve Dummy Cases

Collection Managment ⊗
View Cases
Disable Cases From File

Administration ⊗
Maintain User Roles
View User Assignments
Maintain Modes
Maintain Sites

Maintain Dispatch Rules ⓘ

Survey Cycle: CCHS - 200901

| Rule | Rule Conditions |

Rule

* English Description: Transfer Chinese Cases

* French Description: Transfer Chinese Cases

* Sequence #: 1

* Max Dispatch for Rule: 100

Rule Action

* Mode: CATI-RO ▾   ⦿ Transfer

                           ○ Copy

* Site: Winnipeg ▾   ○ Dispatch Sample

☐ Activate Rule

Save

* Required Field

Close

SMCS

🍁 Statistics Canada

français

Main Menu

Survey Management ⊗
Maintain Surveys
Maintain Survey Cycles
Maintain Survey Control
Parameters
Maintain Location Mode
Managers
Maintain Production Plan
Maintain Dispatch Rules
Approve Collection
Systems

**Sample File
Management** ⊗
Load Sample Validation
File
Load Sample File
Validate Sample File
Unload Sample File
Approve Sample File
Approve Dummy Cases

Collection Managment ⊗
View Cases
Disable Cases From File

Administration ⊗
Maintain User Roles
View User Assignments
Maintain Modes
Maintain Sites
Maintain Rule Sets

View Cases ⓪

Search for existing cases in this survey cycle

Survey Cycle: CCHS - 200901

| Survey Information | Contact Information | Status & Key Variables |

Sample Id:	[_____]	Case Data Location:	[_____ ▼]
Current Mode:	[CATI-RO ▼]	Language:	[_____ ▼]
Current Site:	[Sherbrooke ▼]	Case Province:	[_____ ▼]
Previous Site:	[_____ ▼]	Priority:	[_____]
		# Units of Interest:	[__ ▼] [_____]

[Search]   [Clear]   [Back]

☐		Sample Id	Mode	Site	Language	# Units of Interest	Case Data Location
☐	📦	01303910071202_1011G	CATI-RO	Sherbrooke	English	0	In collection system/mode
☐	📦	01605910133278_1011G	CATI-RO	Sherbrooke	English	0	In collection system/mode
☐	📦	01606910163363_1011G	CATI-RO	Sherbrooke	English	0	In collection system/mode

Total Cases Found: 3   # Cases Selected: 0

[Retrieve]   [Release]   [Route]   [Resolve]   [Disable]

SMCS

Statistics Canada

français

Main Menu

Survey Management
Maintain Surveys
Maintain Survey Cycles
Maintain Survey Control Parameters
Maintain Location Mode Managers
Maintain Production Plan
Maintain Dispatch Rules
Approve Collection Systems

Sample File Management
Load Sample Validation File
Load Sample File
Validate Sample File
Unload Sample File
Approve Sample File
Approve Dummy Cases

Collection Managment
View Cases
Disable Cases From File

Administration
Maintain User Roles
View User Assignments
Maintain Modes
Maintain Sites

View Case Details

Survey Cycle:	CCHS - 200901	Case Data Location:	In collection system/mode
Sample Id:	01303910071202_1011G	Priority:	
Previous Cycle Outcome:	N/A		

Current Case Info | Case Event History | Notes

Current Mode: CATI-RO	Current Site:	Sherbrooke	Collection Start Date: 2009/08/05
Previous Mode:	Previous Site:		Collection End Date: 2009/08/30
	# Units of		
Language: English	Interest:	0	Date Loaded: 2009/08/05 13:24:45
			Date Last Dispatch: 2009/08/06 16:23:01
			Date Last Retrieved:

Contact Information

Contact First Name: VALERIE
Contact Last Name: DUMOUCHEL
Contact Address: HAMLYN RD
ST. JOHN'S,
Contact Phone: (709) 745-1453   Ext:
Contact Email:
                Newfoundland - Daylight Observed
Time Zone: Time
Call Attempts: 1   Max Call Attempts: 0

Date Last Released:
Validity Status: In Scope
Response Status: Non-Response
Resolution Status   In Progress - Disabling from Collection System

Special Treatment:
☐ Refusal
☐ Language
☐ Tracing

Case Progress: Validated sample unit
Process State: Interviewing/data collection

Close

SMCS

Statistics Canada

français

Main Menu

Survey Management ⊗
Maintain Surveys
Maintain Survey Cycles
Maintain Survey Control Parameters
Maintain Location Mode Managers
Maintain Production Plan
Maintain Dispatch Rules
Approve Collection Systems

Sample File Management ⊗
Load Sample Validation File
Load Sample File
Validate Sample File
Unload Sample File
Approve Sample File
Approve Dummy Cases

Collection Managment ⊗
View Cases
Disable Cases From File

Administration ⊗
Maintain User Roles
View User Assignments
Maintain Modes
Maintain Sites

Route Cases

Survey Cycle: CCHS - 200901

Total cases to be routed: 1

Specify the Target Destination.

* Mode: CAPI ▼

* Site: Halifax ▼

Specify the reason these cases are being manually routed.

* Reason: ▼

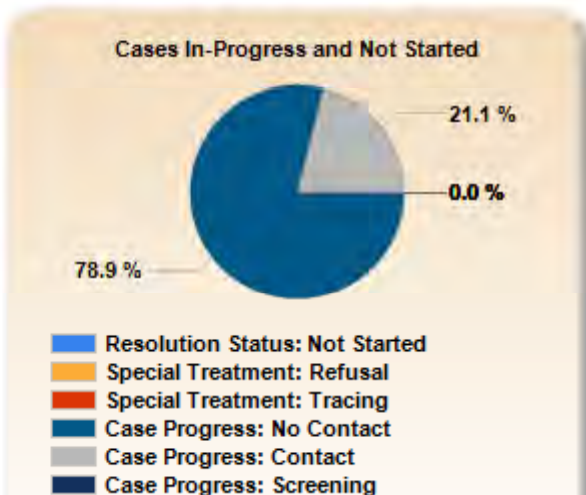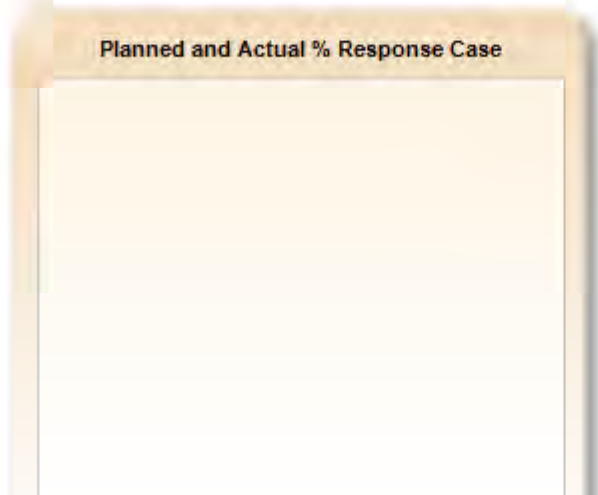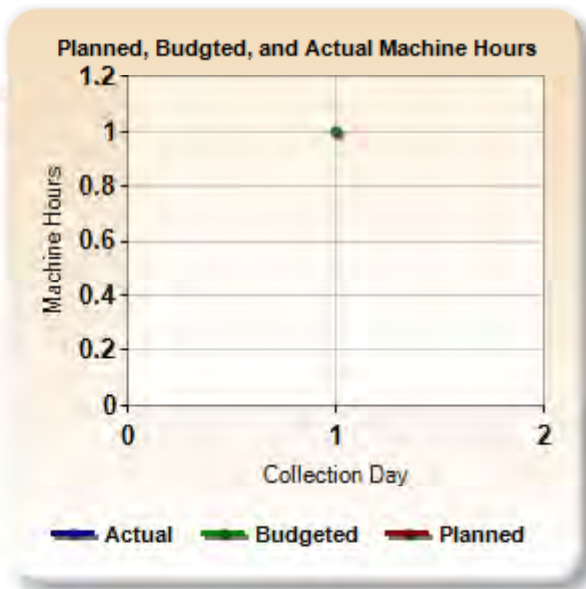| |
| --- |
| |
| capacity issues |
| language cases |
| Site emergency (systems available) |
| Site emergency (systems NOT available) |
| Strike or other HR situation |
| Tracing cases |
| Other |

Close

Administration

Reports
Dashboard
Reports
DIPP

Support

SMCS Support
Contact Us
General Help
Quick Help

Mode: [   ]   Site: [   ]

[Search]   [Clear]

	Survey	Survey Cycle	# Cases Resolved	# Cases Responded	# Machine Hours	# Days Remaining
	CCHS	200901	13	1	0.07	23

Planned, Budgeted, and Actual Machine Hours

Machine Hours vs Collection Day

— Actual   — Budgeted   — Planned

Planned and Actual % Response Case

Cases In-Progress and Not Started

21.1 %

0.0 %

78.9 %

Resolution Status: Not Started
Special Treatment: Refusal
Special Treatment: Tracing
Case Progress: No Contact
Case Progress: Contact
Case Progress: Screening

SMCS

Statistics Canada

français

Main Menu

Survey Management
Maintain Surveys
Maintain Survey Cycles
Maintain Survey Control Parameters
Maintain Location Mode Managers
Maintain Production Plan
Maintain Dispatch Rules
Approve Collection Systems

Sample File Management
Load Sample Validation File
Load Sample File
Validate Sample File
Unload Sample File
Approve Sample File
Approve Dummy Cases

Collection Managment
View Cases
Disable Cases From File

Administration
Maintain User Roles
View User Assignments
Maintain Modes
Maintain Sites

National Progress - Summary

[1] of 1 | 100% | Select a format | Export

National

Group By:	CPMD Section

Reference Date:	Yesterday

CPMD Section	Survey Description		Mode	Site	Collection End Date	Current Cases	Not St
	Name	Cycle					
Health & Prices Surveys	CCHS	200901	CAPI	Halifax	8/30/2009 12:00:00 AM	95	
		200901	CAPI	All	8/30/2009 12:00:00 AM	95	
		200901	CATI-RO	Sherbrooke	8/30/2009 12:00:00 AM	3	
		200901	CATI-RO	Winnipeg	8/30/2009 12:00:00 AM	13	
		200901	CATI-RO	All	8/30/2009 12:00:00 AM	16	

Page 1 of 1

Close

Questions

?

Daniel Boucher　　　　(613) 951-2205
Statistics Canada