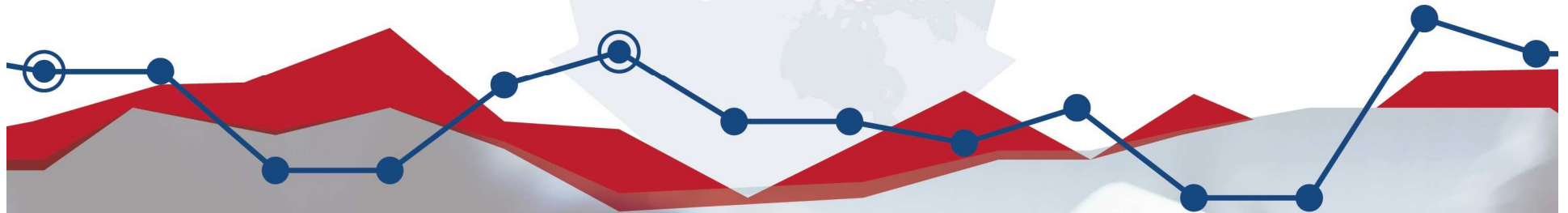


# Full diary three-tier coding, the Canadian experience



Patricia Houle  
Time Use survey Manager  
Session 2: Operationalization of  
ICATUS 2016: the use of a full diary  
2nd EGM on Innovative and Effective  
ways to collect Time-Use Statistics

May 20<sup>th</sup> 2019



Statistics  
Canada

Statistique  
Canada

Canada

# Presentation Outline

- Survey methodology
- Coding structure
- Cati Application
- Three-tier approach, coding and results
- Light diary
- CATI and Electronic Application, coding and results
- Feasibility of three-tier EQ collection
- Time Use considerations



# Overview of Time Use Survey

100

- **Methodology**
  - **Time Use data are collected every 5 to 7 years since 1986. (1986, 1992, 1998, 2005, 2010 and 2015)**
  - **Collection is done during 12 full consecutive months**
  - **A random sample is drawn from the 10 Canadian provinces.**
  - **From contacted households, one person 15 years old or more is randomly selected to complete the survey for a specific reference day**
  - **The retrospective interview must be completed no later than 48 hours from the reference day to enhance recall.**



# Overview of Time Use survey

- Methodology
  - In contrary to other surveys, a conversational style is used with respondents. The interviewers do not have to stick with asking the diary questions as worded, but instead help the respondent to remember what he did during the 24 hours of his reference day.



# Indicators across cycles

- 12 major indicators
  - Personal care
  - Eating and drinking
  - Travel and going from place to place
  - Paid work activities
  - Studying or learning
  - Household chores and maintenance
  - Parental role, caring and help to others
  - Shopping for goods and services
  - Socializing and communicating
  - Civic, religious and organisational activities
  - Sports, exercise and outdoor activities
  - Leisure, hobbies and down time



# First Time Use questionnaire for telephone interview

INTERVIEWER – “X” DAY TO WHICH ACTIVITIES REFER

- 1  Sunday
- 2  Monday
- 3  Tuesday
- 4  Wednesday
- 5  Thursday
- 6  Friday
- 7  Saturday

These next questions ask about your daily activities. We need to know in as much detail as you can recall, what you did during . . . . . (refer to reference day) starting at 4:00 o'clock in the morning. This section will provide information on transportation activity, amount of time spent on housework, leisure, paid work, etc. You may have been doing more than one thing at a time but we are interested in the main activity for each time period. We are not interested in activities which lasted only a minute or two. We also ask where you did each activity and if anyone was interacting with you during the activity.

Would you like an example?

**EXAMPLE:** Yesterday morning I was asleep until 7:15. From 7:15 until 7:30 I got dressed. Then from 7:30 until 7:45 I made breakfast and from 7:45 to 7:55 I ate breakfast with my children. After we ate I cleaned up the dishes, which took 20 minutes.



Statistics  
Canada Statistique  
Canada

Canada

# Pencil in information

Do not ask question "e" about sleep, sex or other personal care activities.

1. a. First of all, starting at 4:00 a.m. what were you doing?

--	--

0	4	:	0	0
---	---	---	---	---

c. When did this end?

	:	
--	---	--

d. Where were you?/  
Were you still ...

Place			or	In Transit		
R's Home	Work Place	Other Place		Car	Walk	Bus & Subway
				Other	Alone	Spouse/Partner
					Child(ren) of Household	Other Family Member(s)
					Friend(s)	Other Person(s)

1  2  3     4  5  6  7     1  2  3  4  5  6

e. Who was with you?/  
Were you still ...

2. a. And then, what did you do next?

--	--

b. When did this start?

	:	
--	---	--

c. When did this end?

	:	
--	---	--

d. Where were you?/  
Were you still ...

Place			or	In Transit		
R's Home	Work Place	Other Place		Car	Walk	Bus & Subway
				Other	Alone	Spouse/Partner
					Child(ren) of Household	Other Family Member(s)
					Friend(s)	Other Person(s)

1  2  3     4  5  6  7     1  2  3  4  5  6

e. Who was with you?/  
Were you still ...



# Example of CATI three-tier hierarchy tree

tActivityCode

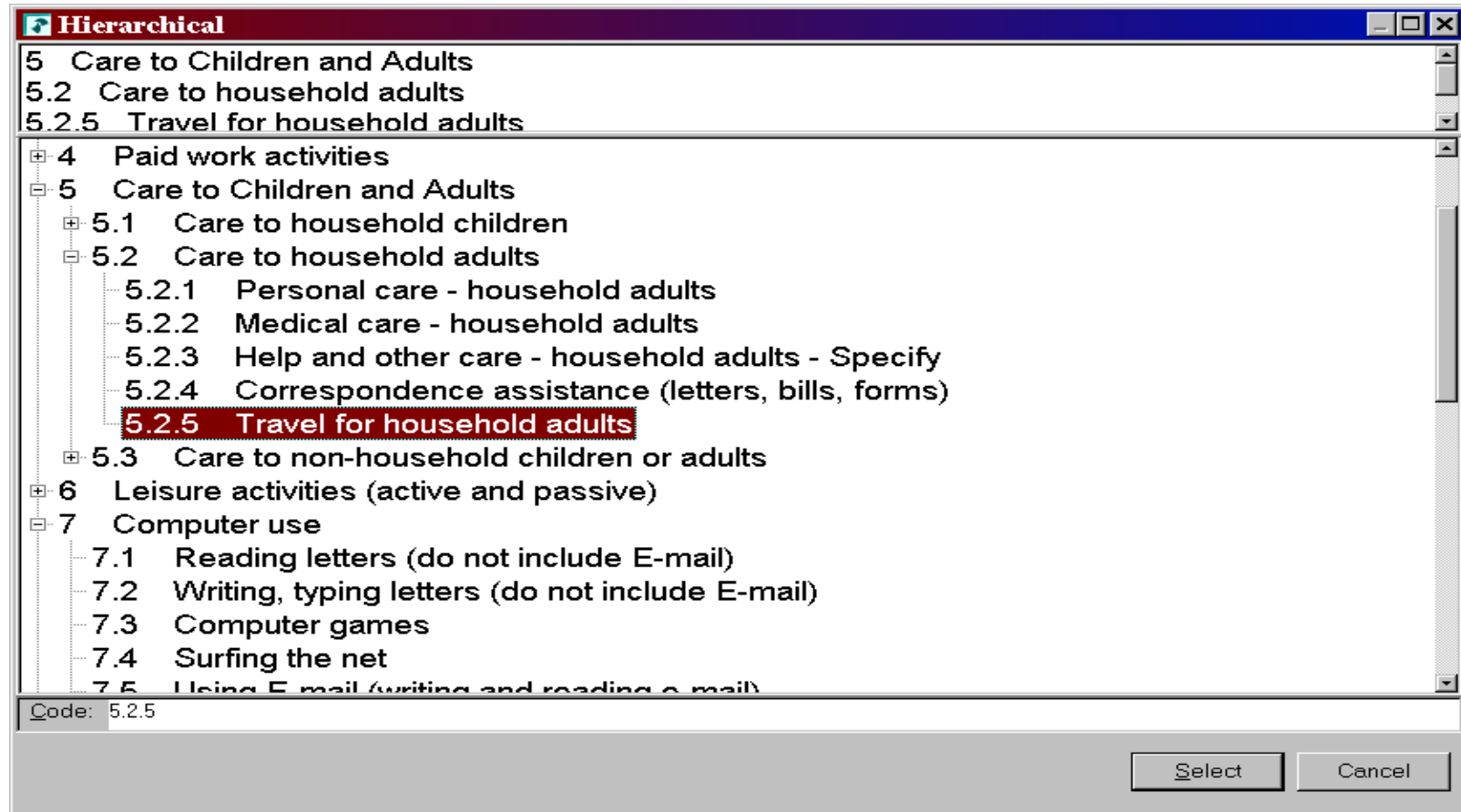
- ⊕ 1 Personal care
- ⊕ 2 Meals
- ⊕ 3 Education activities
- ⊕ 4 Paid work activities
- ⊕ 5 Care to Household Children and Adults
- ⊕ 6 Leisure activities (active and passive)
- ⊕ 7 Computer use
- ⊕ 8 Socializing
- ⊕ 9 Unpaid work activities for respondent's household
- ⊕ 10 Civic, religious, and unpaid work activities done for non-household member(s) and organizations
- ⊕ 11 Shopping activities
- ⊕ 12 Travel related activities

Code: |

Select Cancel



# Example of CATI three-tier hierarchy tree



# Example of three-tier collection

## 6 - Active and passive leisure activities

1. Passive leisure activities (reading, music, T.V., videos)
2. Walking, participating in sports, physical exercise or outdoor activity
3. Hobbies, crafts, games or other leisure activity
4. Attending events or visiting sites (sports, concerts, theatre, museums, etc.)

## 6.3 - Hobbies, crafts games and other leisure activities

- 6.3.1 Hobbies done mainly for pleasure (painting, sketching, photography)
- 6.3.2 Hobbies crafts done for sale or exchange,
- 6.3.3 Home crafts done mainly for pleasure (sewing and needlework)
- 6.3.4 Home crafts done for sale or exchange
- 6.3.5 Games, cards, puzzles,
- 6.3.6 Playing video games,
- 6.3.7 Singing or playing music, drama, dance,
- 6.3.8 Playing computer games,
- 6.3.9 Computer – surfing the net (as a leisure activity),
- 6.3.10 Computer – E-mail use,
- 6.3.11 Computer – Chat groups,
- 6.3.12 Computer – other internet communication,
- 6.3.13 Computer general use (as a leisure activity)
- 6.3.14 Pleasure drives (as a driver),
- 6.3.15 Pleasure drives (as a passenger),
- 6.3.16 Other pleasure drives (e.g. on a bus tour),
- 6.3.17 Other leisure activity – Specify,
- 6.3.18 Travel to/from hobbies or for the sale of crafts
- 6.3.19 Travel to/from other leisure activities,



# Results for 2010

Activity group	Population			Participants			Participation rate		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
	hours and minutes						percentage		
<b>Active leisure</b>	<b>1:13</b>	<b>1:27</b>	<b>0:59</b>	<b>2:22</b>	<b>2:42</b>	<b>2:01</b>	<b>51</b>	<b>54</b>	<b>49</b>
Active sports	0:30	0:37	0:23	1:54	2:12	1:34	26	28	25
Computer use	0:20	0:23	0:17	1:23	1:32	1:14	24	25	23
Video games	0:09	0:14	0:04	2:20	2:40	1:38	6	9	4
Other active leisure	0:14	0:13	0:15	2:05	2:06	2:04	11	10	12

# Light diary coding



- 1 Sleeping, napping, resting, relaxing, sick in bed
- 2 Personal care > Personal hygiene; praying, spiritual activities, meditating; sexual activities
- 3 Health professional visit, consultation
- 4 Self-administered medical care > Taking blood pressure, sugar level, medication, treatment
- 5 Meal, snack or drink preparation
- 6 Eating or drinking > Meals, snacks, drinks
- 7 Transport to or from activity
- 8 Paid work
- 9 Looking for work
- 10 Other income-generating activities
- 11 Paid training
- 12 Break or lunch
- 13 Schooling full time/part time - on site
- 14 Schooling full time/part time - online
- 15 Homework or studying
- 16 Self development or leisure and special interest classes
- 17 Preserving foods > Baking, freezing, sealing, packing foods
- 18 Indoor house cleaning, dish washing, tidying
- 19 Taking out garbage, recycling, compost, unpacking goods
- 20 Laundry, ironing, folding, sewing, shoe care
- 21 Repair, painting or renovation
- 22 Organizing, planning, paying bills
- 23 Unpacking groceries, packing and unpacking luggage for travel and/or boxes for a move
- 24 Outdoor maintenance > Car repair, ground maintenance, snow removal, cutting grass
- 25 Planting (picking), maintaining, cleaning garden, caring for house plants
- 26 Pet care > Feeding, walking, grooming, playing
- 27 (Caring for a child from your household less than 15)) Personal care, getting ready for school, supervising homework, reading, playing, reprimanding, educational, emotional help
- 28 (Caring for a child from your household less than 15)) Accompanying to or from school, bus stop, sports, activities, parent school meetings or appointments
- 29 (Caring for a teenager from your household 15 to 17)) Helping with
- 35 (Caring for an adult from another household) Accompanying to or from appointments, shopping
- 36 Helping relatives, friends, neighbours, acquaintances > Exclude: caregiving
- 37 Shopping for or buying goods > Gasoline, groceries, clothing, car
- 38 Shopping for services > Legal services, financial services, vehicle maintenance
- 39 Researching goods or services
- 40 Selling of goods or services
- 41 Socializing or communicating - in person
- 42 Socializing or communicating - using any type of technology > Phone email, social media, Skype
- 43 Organizational activities
- 44 Voluntary work
- 45 Religious activities
- 46 Civic participation > Voting, jury duty
- 47 Exercising
- 48 Organized recreational sports
- 49 Competitive sports (indoor or outdoor)
- 50 Outdoor sports (non-competitive) > Skiing, skating, swimming, tennis football, baseball
- 51 Outdoor activities > Fishing, hunting
- 52 Coaching or administering sports
- 53 Attending cinema, exhibitions, library, concerts, theatre, entertainmer events
- 54 Attending sporting events
- 55 Visiting museums, art galleries, heritage sites, zoos, observatories
- 56 Arts and hobbies > Drawing, painting, crafting, playing an instrument, dancing, collecting, knitting, photography, board and card games, gambling
- 57 Leisure Activity > Walking, pleasure driving, birdwatching
- 58 Reading > Online or paper version books, periodicals, newspaper, letters
- 59 Writing > Letters, cards, books, poems
- 60 Watching television or videos
- 61 Listening to music or radio
- 62 Use of technology > General computer use, video games, Internet, a music production

# CATI collection

Yesterday at 4:00 AM, what were you doing?

Code:

Main Activity:

How long did you spend on this activity?

Start :  
04:00

End :  
04:10

Hours :  
0


Minutes :  
0

Were you doing anything else at the same time?


Code:

Simultaneous Activity:

Who was with you?

- On my own  Or
- Spouse, partner
  - Household child(ren) - less than 15 years old
  - Household child(ren) - 15 years or older
  - Parents or parents-in-law
  - Other household adult(s)
  - Other family member(s) from other households
  - Friend(s)
  - Colleague(s) / classmate(s)
  - Other people

Where were you?



During this time period, did you use any information technology device such as a tablet, smartphone, computer or laptop?

# EQ Diary instrument

100

What were you doing at **4:00 a.m.**?

<<< Select >>>

## **Sleeping**

Sleeping, napping, resting, relaxing, sick in bed

## **Own personal care**

Personal - hygiene, washing, dressing, hair care, brushing teeth

Praying, spiritual activities, meditating

Sexual activities

Health professional visit, consultation

Taking blood pressure, sugar level, medication, treatment

## **Eating or drinking**

Preparation - meals, snacks, lunches

Eating or drinking - meals, snacks, drinks

## **Paid work activities**

Working at main job or other jobs

Business travel

Looking for work

Other income-generating activities

Paid training

Personal appointment

Break or lunch

## **Studying or learning**

Main schooling full time/part time - on site

Main schooling full time/part time - online

Homework

Self development

Break or lunch

Leisure and special interest classes

## **Travel and going from place to place**

Transport to or from activity

## **Household chores or maintenance**

Time use and its challenges

57%

Time use diary

Starting at 4:00 AM, how long did this activity last?

<<< Hour >>> <<< Minute >>>

Please indicate if you were doing any of these activities at the same time.

4:00 AM ;

Simultaneous Activity 1

<<< Select >>>

Simultaneous Activity 2

<<< Select >>>

Where were you?

4:00 AM ;

<<< Select >>>

Who was with you?

4:00 AM ;

Select all that apply

- On my own
- OR**
- Spouse, partner
- Household child, children (less than 15 years old)
- Household child, children (15 years or older)
- Parents or parents-in-law
- Other household adult(s)
- Other family member(s) from other households
- Friend(s)
- Colleague(s), classmate(s)
- Other people

During this time period, did you use any information technology device such as a tablet, smartphone, computer or laptop?

4:00 AM ;

- Yes
- No

# 2015 results with light diary

100

	Canada <a href="#">(map)</a>								
	Total, 15 years and over <sup>2</sup>								
	Both sexes			Male			Female		
	Daily average time, population <sup>3</sup> <sub>9</sub>	Daily average time, participants <sup>3</sup> <sub>10</sub>	Participation rate <sup>3 11</sup>	Daily average time, population <sup>3</sup> <sub>9</sub>	Daily average time, participants <sup>3</sup> <sub>10</sub>	Participation rate <sup>3 11</sup>	Daily average time, population <sup>3</sup> <sub>9</sub>	Daily average time, participants <sup>3</sup> <sub>10</sub>	Participation rate <sup>3 11</sup>
Activity group <sup>4</sup>	2015	2015	2015	2015	2015	2015	2015	2015	2015
Active leisure <sup>12</sup>	1.0	2.5	41.5	1.2	2.8	42.1	0.9	2.2	40.9
Use of technology <sup>13</sup>	0.7	2.2	30.4	0.8	2.5	32.2	0.5	1.8	28.6
Arts and hobbies, leisure activities or writing <sup>14</sup>	0.4	2.2	16.8	0.4	2.3	15.6	0.4	2.2	18.0



Statistics Canada  
Statistique Canada

Canada



# Feasibility of having three-tier coding in EQ

100

1 By mail	▶ Press Start to begin	Start
1 By telephone	▶ Press Start to begin	Start
1 By television, radio or telethon	▶ Press Start to begin	Start
1 Online	▶ Press Start to begin	Start
1 On your own	▶ Press Start to begin	Start
1 Charity event	▶ Press Start to begin	Start
1 In memory of someone	▶ Press Start to begin	Start
1 Someone at work	▶ Press Start to begin	Start
1 Door-to-door cavassing	▶ Press Start to begin	Start
1 Shopping centre or on the street	▶ Press Start to begin	Start
1 Place of worship	▶ In progress	Continue
✔ Sponsoring someone	▶ Complete	Review
1 Other method	▶ Press Start to begin	



Statistics Canada  
Statistique Canada

Canada

# Feasibility of having three-tier coding in EQ



## Name of organization

To search for your organization, type the first few letters or keyword to narrow down the choices.

If you cannot find or cannot remember the name of the organization, select the appropriate option below.

  
GSA\_Q010A\_1

OR

### You cannot find the name of the organization

GSA\_Q010B\_1

→ Specify the name of the organization

Name of organization  
  
GSA\_Q015\_1

→ What does this organization do?

Activity of the organization  
  
GSA\_Q020\_1A

Hidden related field

### You cannot remember the name of the organization

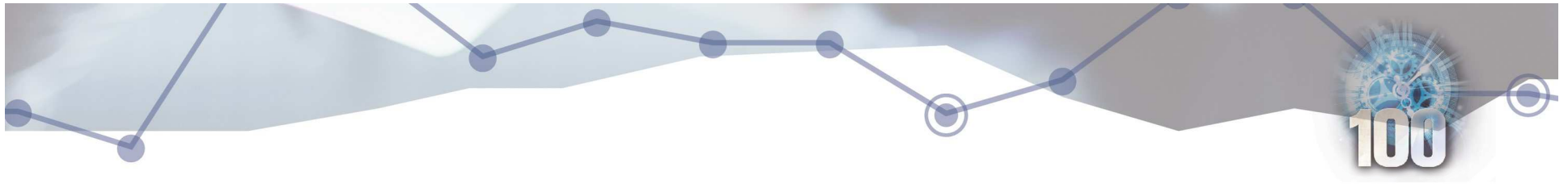
→ What does this organization do?

Activity of the organization  
  
GSA\_Q020\_1B

Hidden related field

## Harder to code activities

- Bring flower to the cemetery – usually coded as religious activity
- Walking (leisure, transportation, exercising) especially difficult when it is a mix of reasons – if going somewhere we will code as transportation
- Sport activities require a lot of prompting to code it to the proper one for example swimming



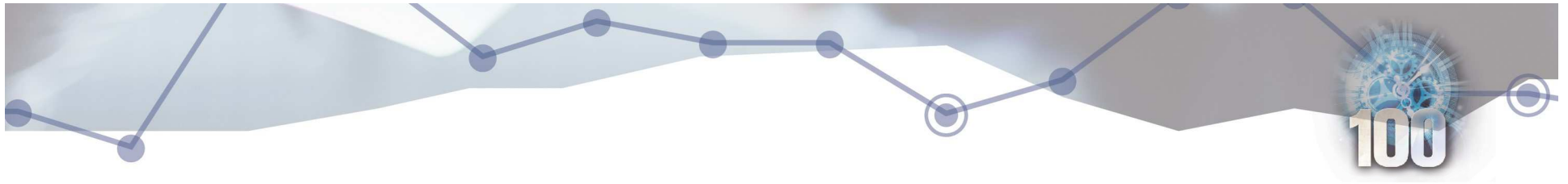
## Contextual questions

- Increase respondent burden
- Select activities that would benefit from knowing “for whom the activity was done”
  - (sleep, personal care, work and study, eat ... should be excluded)
  - Adds complexity to the application flow
  - Telephone mode VS self completed



## Labour force questions

- The Time Use diary only collects general work information done during the 24 hour recall for those who worked
- Stylized portion of the questionnaire contains a whole set of labour force questions which provide the type of work, the usual work hours, the employer, the duties, etc.
- Could link NAICS and NOCS codes back to Time Use



# Questions?

Patricia Houle  
Time Use Survey Manager  
General Social Survey Program  
Social and Aboriginal Statistics Division  
Statistics Canada  
[patricia.houle@canada.ca](mailto:patricia.houle@canada.ca)



Statistics  
Canada Statistique  
Canada

Canada