Collecting the Consumer Price Index in Canada

FedCASIC 2013

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High Level CPI Process

Generate file of prices to be collected → Collect data → Process data → Index Calculation → Data analysis → Release indices
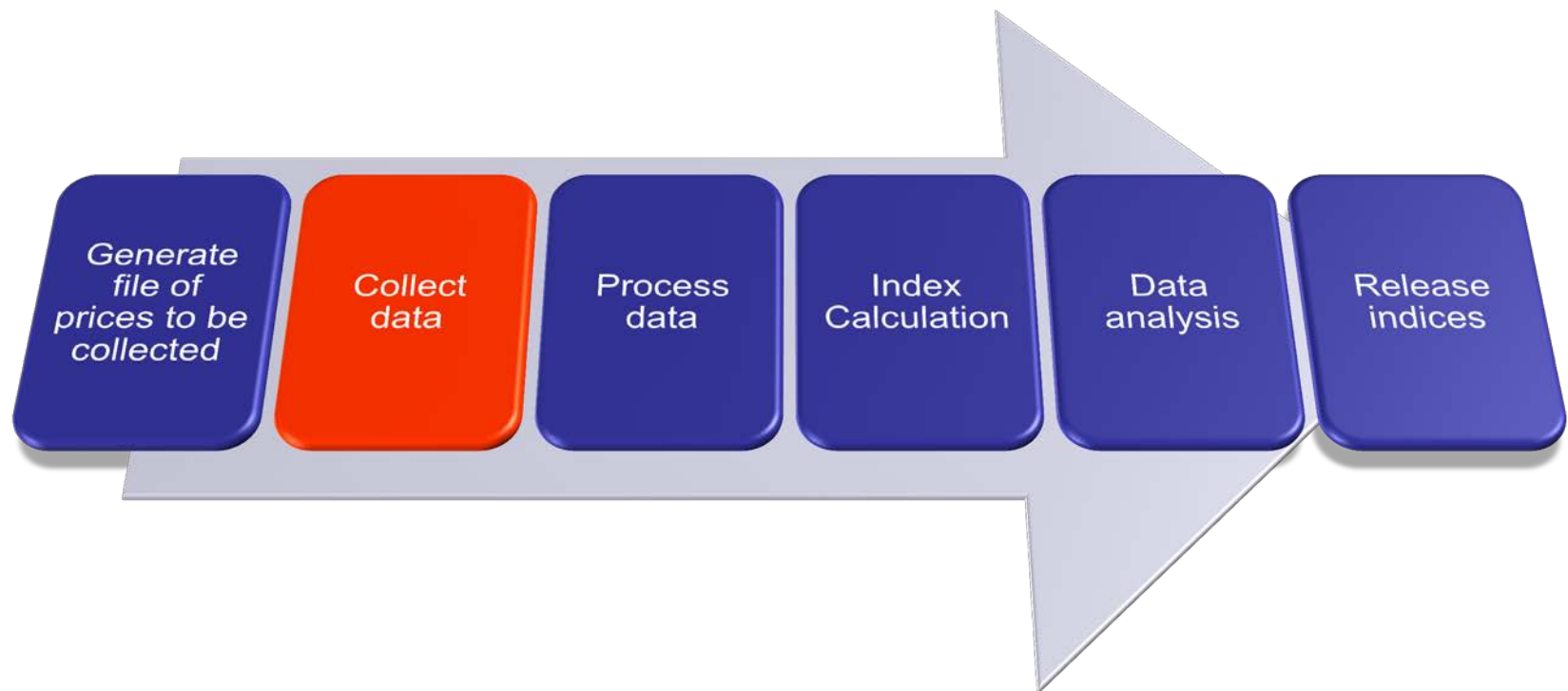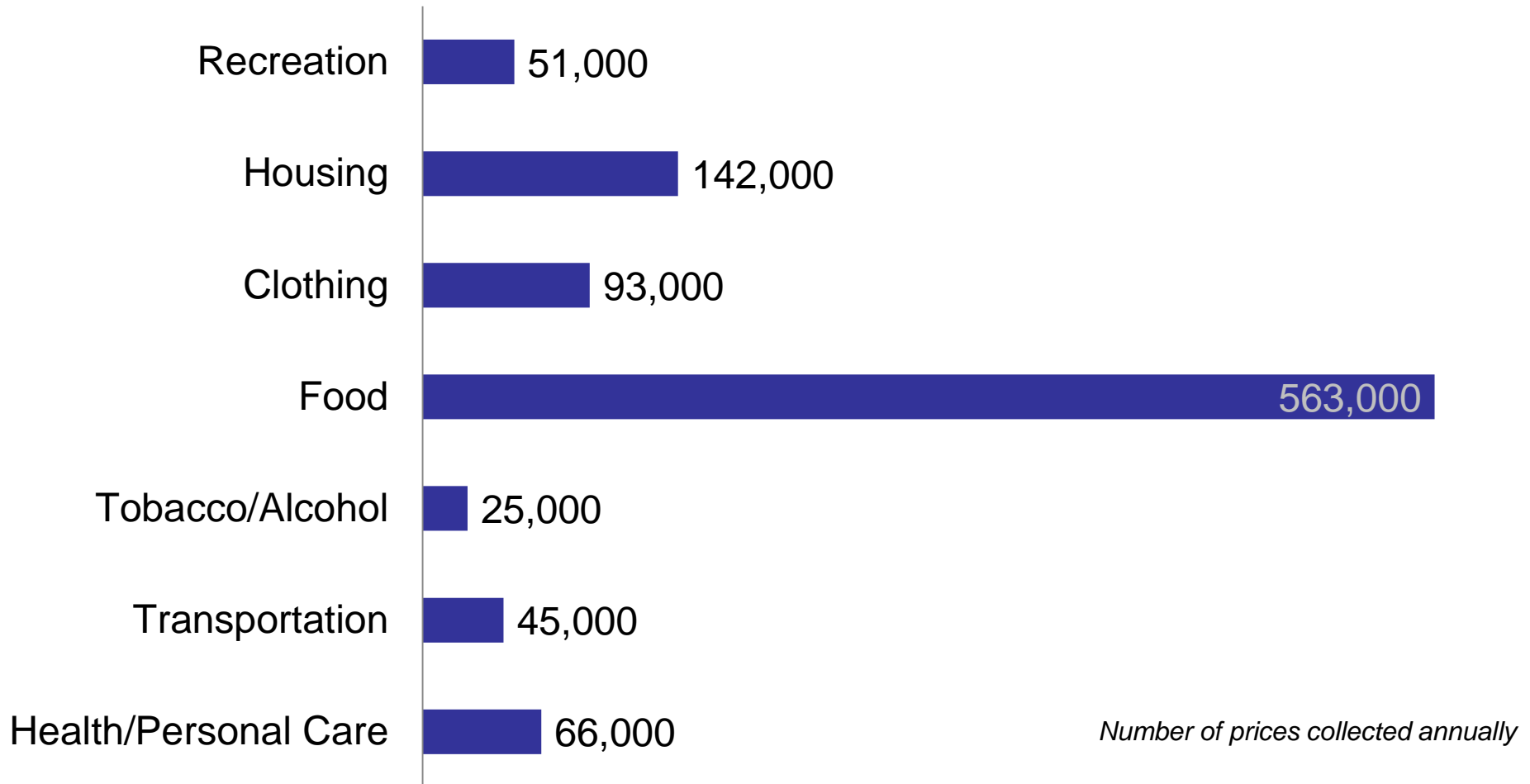
CPI Facts

- 80,000+ prices collected monthly

- 4,000+ outlets contacted monthly

- 90+ interviewers working across the country monthly

- $2.8M collection budget annually

Statistics Canada • Statistique Canada

What we sample

Category	Number of prices collected annually
Recreation	51,000
Housing	142,000
Clothing	93,000
Food	563,000
Tobacco/Alcohol	25,000
Transportation	45,000
Health/Personal Care	66,000

Number of prices collected annually

High Level System Overview

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┌─────────┐      ┌─────────┐      ┌─────────┐
│ Griffin │ <──> │ Phoenix │ ───> │ Cygnus  │
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                      ↕
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                 │ Caseman │
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                 │  CAPS   │
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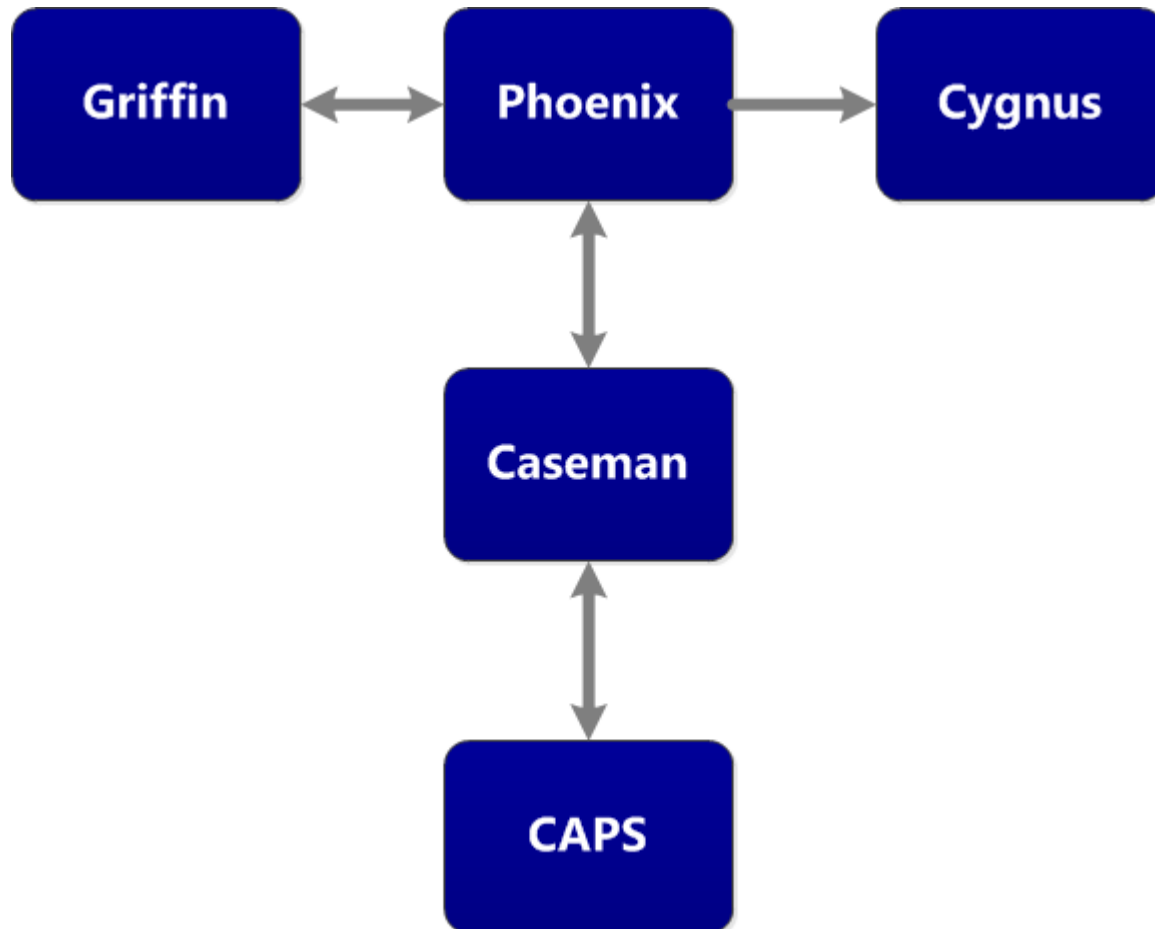
Computer Assisted Pricing System
CAPS

- Displays Interviewers workload
- Records all pricing information
- Displays previous cycle pricing details
- Enforces hard and soft Edits
- Allows interviewers to modify the sample

Computer Assisted Pricing System
CAPS continued

- Dynamic form rendering engine
  - Presents additional forms to the Interviewer as needed
  - Used for gathering product specific details
    - E.g., clothing, electronics
  - Forms are built in head office using Griffin and sent to the hand held monthly

Back Office Systems
Caseman

- Workload management software

- Used for CPI and many other surveys

- Allows regional managers to distribute workload equitably amongst interviewers

- Workloads are abstracted from survey details

- Includes reporting functions to track the progress of completed assignments

Back Office Systems
Phoenix

- Creates the sample each month

- Allows users to track the progress of collection

- Applies edits and imputations to data

- Includes the complete set of representative products

- Manages new inclusions to the sample

Back Office Systems
Cygnus (MPS)

- A CPI System used to create the various indices following each collection period

- Applies weights to collected data

- Aggregates various sources of data

Back Office Systems
Griffin

- A suite of tools to allow users to:
  - Build highly detailed, product specific, forms to be sent to the handheld computers
  - Approve new forms
  - Generate and view forms
  - View, compare and manipulate data collected using auxiliary forms

Statistics Canada • Statistique Canada

Handheld
Motorola MC55

Handheld Specifications

- Motorola MC55 PDA

- 240 x 320 touch screen

- 520 MHz ARM processor

- 128 RAM

- Windows Mobile 6.1

- CradlePoint External dial-up modems

Handheld
Platform technologies

- Sybase Afaria
  - File Synchronization
- MobiControl
  - Help Desk Remote Control Utility
- PointSec
  - Encryption and Authentication

Handheld
Development technologies

Programming

- .Net Compact Framework 3.5
- Visual Basic / C#

Databases

- Microsoft SQL CE
- Sybase SQL Anywhere

Handheld
Factors for hardware selection

- Can fit in one hand

- Adjustable hand strap

- Maximum Weight of 20 ounces (567 grams)

- Must pass Canadian Military Standard for water and dust resistance, 3 foot drop, temperature range of -10C to 40C

- Battery life 6 hours of continuous use

Future Plans

- A single system will replace all existing collection platforms, including the computer assisted pricing system

- Tablet computers are being evaluated to replace the current generation of collection hardware

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