The Quality Assurance Reviews at Statistics Canada

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Outline

- The Big Picture
  - Quality management
- What are the quality assurance reviews
  - Benefits
  - Challenges
  - Findings
  - Next Steps
Role of the Quality Secretariat

- Promote and support the use of sound quality management practices
  - Support the development and implementation of policies and procedures
  - Design and manage studies related to quality management
  - Provide advice and assistance to programs
  - Support corporate management in the preparation of performance reports on quality
  - Answer requests from other agencies for information or assistance related to quality management
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Quality Assurance Reviews

- Quality assessment
  - Peer review
  - Compliment to formal audit
- Internal
  - Not self assessment
- Low cost
- Flexible, adaptable
- Wide-spread benefits
Quality Assurance Reviews

- Independent review of 5 or 6 statistical programs every year, since 2006
- Conducted through meetings and gathering of documentation
- Look at risks to the program delivering its usual product
  - Example of a risk: software system rusting out
- Highlight good practices and make recommendations
  - Example of a good practice: system renewal plan
Mandate and objectives

- Demonstrate how quality is being managed
- Demonstrate how risks are being controlled
- Spread knowledge of effective quality assurance practices and the risks they can mitigate
- Identify where resources should be used to reduce risks to quality
Scope

- Initially, only looked at processing steps
- Later, expanded to include implementation and analysis

Programs

- Sample survey, cost-recovery, admin data

Functions

- Knowledge transfer, coding methods, seasonal adjustment practices, certification practices
1 Specify Needs
   1.1 Determine needs for information
   1.2 Consult and confirm needs
   1.3 Establish output objectives
   1.4 Identify concepts
   1.5 Check data availability
   1.6 Prepare business case

2 Design
   2.1 Design outputs
   2.2 Design variable descriptions
   2.3 Design data collection methodology
   2.4 Design frame and sample methodology
   2.5 Design statistical processing methodology
   2.6 Design production systems and workflow

3 Build
   3.1 Build data collection instrument
   3.2 Build or enhance process components
   3.3 Design data collection methodology
   3.4 Test production system
   3.5 Test statistical business process
   3.6 Finalize production system

4 Collect
   4.1 Select sample
   4.2 Set up collection
   4.3 Run collection
   4.4 Finalize collection

5 Process
   5.1 Integrate data
   5.2 Classify and code
   5.3 Review, validate and edit
   5.4 Impute
   5.5 Derive new variables and statistical units
   5.6 Calculate weights
   5.7 Calculate aggregates
   5.8 Finalize data files

6 Analyse
   6.1 Prepare draft outputs
   6.2 Validate outputs
   6.3 Scrutinize and explain
   6.4 Apply disclosure control
   6.5 Finalize outputs

7 Disseminate
   7.1 Update output systems
   7.2 Produce dissemination products
   7.3 Manage release of dissemination products
   7.4 Promote dissemination products
   7.5 Manage user support
   7.6 Produce dissemination products
   7.7 Update output systems
   7.8 Produce dissemination products
   7.9 Manage user support

8 Archive
   8.1 Define archive rules
   8.2 Manage archive repository
   8.3 Preserve data and associate metadata
   8.4 Dispose of data and associated metadata

9 Evaluate
   9.1 Gather evaluation inputs
   9.2 Conduct evaluation
   9.3 Agree action plan
   9.4 Gather evaluation inputs
   9.5 Conduct evaluation
   9.6 Agree action plan

Levels 1 and 2
Generic Statistical Business Process Model, version 4.0
(Joint UNECE/Eurostat/OECD Work Session, April 2009)
Reviewers

- Experienced middle managers
- Work in pairs
- Nominated by their superiors
- Review any program other than their own
- Typical workload – twelve working days, spread over an eight month period
Steering committee

- Senior managers
- Responsible for the programs under review
- Ensure relevant and timely information is shared
- Guide and facilitate the review process
- Support findings
Information Gathering

- Minimal burden on program being reviewed
- 3-5 meetings
  - Program manager
  - Team members
  - Service providers (collection specialists, methodologists, IT specialists)
  - Internal clients
- Tools:
  - Generic Statistical Business Process Model
  - Already existing documentation
Deliverables

- Summary presented to Policy Committee
  - “public” within Statistics Canada
- Formal report submitted to Director
  - Available upon request

- Catalogue of risks, quality assurance practices and recommendations
  - Maintained by Quality Secretariat
Benefits

- Reviewers
  - On-the-job training, networking

- Programs being reviewed
  - Free advice
  - Exposure

- The whole organization
  - Management training
  - Commitment to quality
  - Shared good practices
Challenges

- **Choosing programs**
  - Known (or suspected) risks
  - Redesign
  - Good coverage of sectors

- **Governance**
  - Transparency, availability
  - Sensitive information
  - Follow-up
Findings: Risks and Solutions

- Staffing
  - Corporate Staffing Plan
- Project management
  - Departmental Project Management Office
- Systems and processing
  - Corporate Business Architecture
Findings: Risks and Solutions

- Standardization
  - Harmonized questionnaire content, Architecture Review Board

- Documentation
  - Directive on the Management of Statistical Microdata Files
Next steps

- Assess the distribution of programs reviewed
  - Propose selection criteria
- Categorize the recommendations made to date
  - Propose a follow-up strategy
  - More promotion of risk mitigating solutions
- Look at what other NSOs are doing
  - Improve efficiency
Thank-you!

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