Measurement of the Digital Economy at Statistics Canada

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Digital Economy Program

- Two major components to the program
  - **Demand-side indicators**
    - Survey of Digital Technology and Internet Use
    - Canadian Internet Use Survey
  - **Supply-side indicators**
    - Annual Survey of Telecommunications
    - Quarterly Survey of Telecommunications
    - Broadcasting surveys
Demand side indicators

- **Canadian Internet Use Survey (Individuals & households)**
  - Internet use
  - Intensity of use
  - Activities online
  - Privacy and security practices
  - E-commerce

- **Survey of Digital Technology and Internet Use (Enterprise)**
  - Website use and characteristics
  - Information and Communications Technologies use
  - E-commerce (B2B / B2C)
  - ICT specialists and training
  - Security practices
Background to demand side measurement

- Measurement of demand-side indicators of the Digital Economy including e-commerce by both individuals and enterprises has taken place since the late 1990s
  - Conducted mainly as *ad hoc* surveys – most recently as the *Survey of Digital Technology and Internet Use (2013)* and the *Canadian Internet Use Survey (2012)*
  - From 1999 to 2007, the program was funded by a combination of Policy Research Data Gap (PRDG) and cost-recovery monies
  - Since 2009, the program has been maintained through a cost-recovery arrangement with Industry Canada
Supply side indicators

- Annual and Quarterly Surveys of Telecommunications:
  - conducted jointly with CRTC
  - financial performance & economic contribution of telecommunications services sub-sector
  - measure deployment & use of telecommunications infrastructure
  - Supplemented by financial and infrastructure information from Cable Survey

- Other indicators produced elsewhere within Statcan:
  - Employment, ICT industries
  - Software and computer services economic statistics
  - Price indices: Telecommunications services price index (producer price, in development), computer and peripheral price indexes
Users

- System of National Accounts (SNA): supply side indicators
- Policy Departments
  - Industry Canada
  - Essential Skills Development Canada
  - Heritage Canada
  - Treasury Board Secretariat
  - Canadian Radio-television and Telecommunications Commission

- Provincial Governments and municipalities

- International Telecommunications Union
- United Nations Conference on Trade and Development (UNCTAD)
- Organisation for Economic Cooperation and Development (OECD)
  - Data are annually reported to the OECD
  - Guide to Measuring the Information Society is the internationally accepted standard for the measurement of the Digital Economy
Digital Economy Measurement Framework

- Developed in conjunction with data users and after extensive consultation with policy partners
  - Identifies data gaps
  - Promotes Statistics Canada’s (and ISTD’s) role as the central hub of data collection
  - Presents opportunities for collaboration

- Reflects Canada’s data needs and priorities but also dovetails with priorities laid out internationally in the OECD’s ‘Measurement Agenda for the Digital Economy’

- The framework lays out a comprehensive strategy, including action items, to address data gaps and encourage synergies in data collection and dissemination
Partnerships and collaboration

- Holistic approach to measurement of the digital economy

- Subject matter expertise resides in Investment, Science and Technology Division but the subject matter reaches across divisions

- Coherence and comprehensiveness across divisions, and other departments and organisations are essential for the overall success of measurement of the digital economy
Evolving Subject Matter

- Must measure and be able to disseminate data that are not only accurate and timely but **relevant**

- To this end, ISTD attends and participates in expert sub-groups on digital economy measurement at the OECD as part of involvement with Working Party on Measurement and Analysis of the Digital Economy
  - Actively participating in two expert sub-groups currently
    - E-commerce
    - Use of the Internet by children

- Active participation provides multiple benefits
  - Statistics Canada is able to follow and learn from the experience of other countries
  - Statistics Canada is able to influence the agenda in terms of what should/can be measured
Environmental scan

- **Opportunities**
  - Data can provide valuable insight for Statistics Canada’s own Electronic Questionnaire (EQ) collection activities
  - Wide-reaching subject matter that is relevant on many current surveys at Statistics Canada
  - 2014 – Digital Economy Strategy released by Industry Canada
  - OECD work on alternate measurement (direct measurement)

- **Threats**
  - Maintaining relevant and accurate ongoing measures
Ongoing and upcoming work

- Establishment of interdepartmental partnerships on digital economy

- **Content integration**
  - E-commerce modules on retail, wholesale and services surveys
  - Business intelligence module added to Survey of Advanced Technology
  - Social identity and digital culture cycles on the General Social Survey

- **Addressing data gaps**
  - Continued consultation with policy partners and data users to ensure relevance
  - Continued engagement with the Working Party on Measurement and Analysis of the Digital Economy
  - Modernization of digital economy framework action plan is in place but must be enacted
Key components of an action plan

- Maintenance and development of key partnerships
- Assessment of feasibility of implementing direct measurement of Internet performance onto social and business surveys
- Implementation of a URL address field on the Business Register
- Annual key indicators of e-commerce, ICT use and skills associated with ICT use on industry and employment surveys
- Enhancements to supply side indicators to measure economic contribution of content delivered online (tax data, new content module or survey)
- A biennial cross-economy enterprise survey of ICT use (or technology and innovation with rotating content on ICT use)
- A biennial Canadian Internet Use Survey, including children in the population frame
- Implementation of key ICT-related indicators on existing social surveys
Conclusion

- **Short-term challenges**
  - Continued implementation of action plan from Digital Economy Measurement Framework
  - Maintaining project momentum

- **Long-term challenges**
  - Greater interest amongst policy makers in linkages and outcomes
  - Evolving subject matter and new areas of interest continue to develop and shift priorities (i.e. Privacy and security, ICT skills)
ANNEX: Digital Economy Measurement Framework