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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

