ITAPA 2002
DREAM, VISION, REALITY

**"The Information Society and
Canada: Policy Foundations"
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Canada**

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Presentation Agenda

- Canada's Telecommunications Policy and Regulatory Institutions
- The Legislative Framework
- Impact to date
- Building on the Policy base
- The Policy Development Process: The Example of eCommerce
- The Networked Age: The National Broadband vision

Basic Principles

- Creation of a Pro-Competitive Environment
- Government steps in where market forces do not work

Key Policy Objectives of the Telecommunications Act 1993

- Orderly development of a Canadian telecommunications system that serves to strengthen the social & economic fabric of Canada and its regions
- Access to affordable & reliable services in both urban and rural areas in all regions of Canada
- Enhanced efficiency & competitiveness of Canadian industry
- Canadian ownership of the infrastructure
- Promotion of the use of Canadian transmission facilities
- Increased reliance on market forces & efficient, effective regulation where required
- Encouragement of research of development and innovation
- Responsiveness to needs of users
- Protection of privacy of persons

The 1993 Telecommunications Act: Powers of the Regulator (CRTC)

- CRTC is an independent regulatory body
- Authority comes from the *Telecommunications Act* and the *Broadcasting Act*
- Has the authority to exempt classes of carriers from application of the Act (s.9), and
- Forbear from regulating, in whole or in part (presumption in favour of forbearance in competitive markets) (s.34)
- Explicit authority to use alternate forms of regulation (s.27)
- Full range of regulatory powers, quasi-judicial status (s.22-71)
- Required to use powers to implement policy objectives and directions and to ensure that rates are just and reasonable (s.47)

Canadian Telecommunications Policy and Regulatory Institutions

Policies are developed by:

Industry Canada	-	Telecommunications
	-	Radiocommunications
Canadian Heritage	-	Broadcasting

Regulations are administered by:

Canadian Radio-television and Telecommunications Commission	-	Telecommunications
	-	Broadcasting
Industry Canada	-	Radiocommunications

Legislative Framework

Telecommunications Act
1993, amended in 1998

→ **Enhanced efficiency, innovation and competitiveness**
→ **Universal access and affordability**

Radiocommunication Act
1989

→ **Efficient and optimum use of spectrum**
→ **Promote innovation and R&D**

Broadcasting Act
1991

→ **National identity & cultural sovereignty**
→ **Make predominant use of Canadian resources**

Canadian Radio-Television and Telecommunications Commission (CRTC)

→ **Independent regulatory body**
→ **Authority derives from the Telecommunications Act and the Broadcasting Act**

Impacts of Competition

- Prices of wireless and long distance services have dropped by 30 - 50% and in some cases more.
- Rapid introduction of new services at some of the lowest prices in the world. Internet access, DSL & cable modem penetration highest world wide.
- "Rate rebalancing" has brought the price of basic local telephone service closer to costs; "rate restructuring brought prices in rural areas closer to those in urban areas.
- Basic local service is subsidized from telecommunications service providers: overall level of subsidy has declined, and is more targeted to high cost areas.
- According to a recent OECD study, the price of residential telephone service in Canada is among the lowest of the G7.

The Canadian Strategy to Promote Safe, Wise and Responsible Internet Use

The Government's approach:

- Supporting initiatives that educate and empower users

- Promoting effective self-regulation

- Strengthening law enforcement

- Fostering international collaboration

Preparing Canada for the Digital World

Canada's Information Highway Initiative

- **Speech from the Throne: January 18, 1994**

- **Government to develop strategy to address challenges of Information Highway**

Information Highway Advisory Council

- Created in April 1994 by Minister of Industry

- 29 members representing:

- Telecommunications, broadcasting and information technology industries
- Artistic, creative and educational communities
- Consumer and labour groups

Mandate

To provide advice to government, as part of a comprehensive consultation process to develop Canada's strategy for the Information Highway

IHAC - Policy Objectives

- **Create jobs through innovation and investment**

- **Ensure universal access at reasonable cost**

- **Reinforce Canadian sovereignty and cultural identity**

Advisory Council Report

September 27, 1995
224 recommendations - 3 themes

- **Building the Infrastructure**
- **Content**
- **Seizing the Benefits**

Connection
Community
Content

The Challenge of the
Information Highway

Final Report
of the Information
Highway Advisory Council
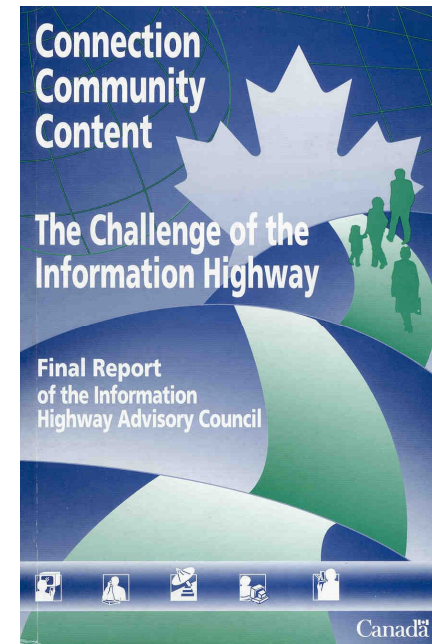
Canada

GOVERNMENT RESPONSE 1996

- "Building the Information Society: Moving Canada into the 21st Century"

- Policies & Initiatives to facilitate Canada's transition to an information society and knowledge economy by:

    - Building Canada's Information Highway
        - creating a competitive environment
        - encouraging new services
        - stimulating information highway R&D
        - making networks talk to each other

GOVERNMENT RESPONSE 1996

- **Growing Canadian content**
  - strategy for Canadian cultural content
  - content and information industry development
  - digitization of Canadian content
  - copyright protection
  - creators and the new technologies

- **Realizing the Economic and Social Benefits for All Canadians**
  - realizing the economic benefits
  - realizing the social benefits
  - conditions for success

- **Getting Government Right**
  - quick and easy access
  - electronic commerce by government
  - improved efficiency in government
  - a common electronic information infrastructure

Final Report of the Advisory Council

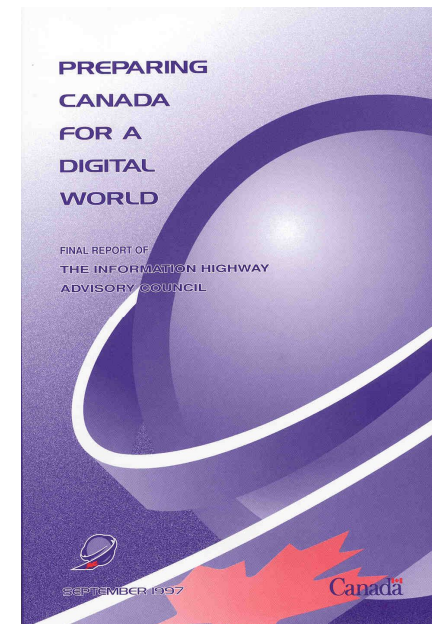**Reporting on Canada's Progress**

- **Status of Information Highway initiatives**

Advancing the Public Policy Agenda

- **Provide further advice on:**

    - **Content, access, jobs and growth**

- **Address new issues:**

    - **Internet, Electronic Commerce**

Reported in September 1997

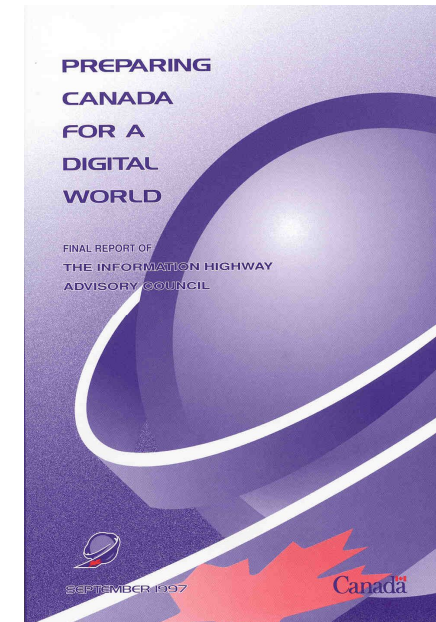- **Preparing Canada for a Digital World**

Preparing Canada for a Digital World
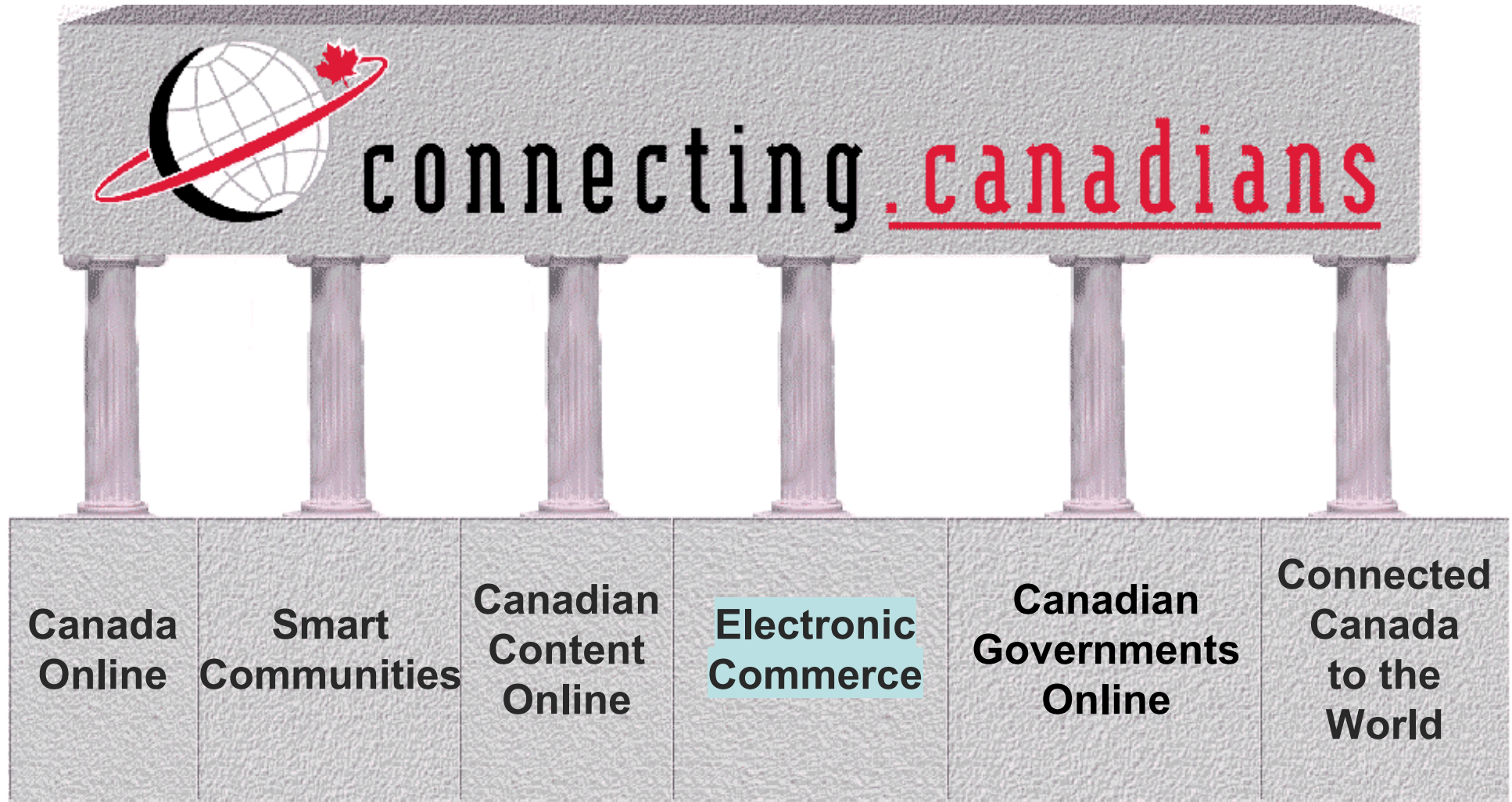
100 Recommendations

- Building an Advanced Network Infrastructure
- Growth of the Internet
- Accelerating Access
- Promoting Canadian Content
- Jobs and Growth
- Responding to the Changing Workplace

Benchmarking Indicators

Reporting on Canada's Progress

PREPARING
CANADA
FOR A
DIGITAL
WORLD

FINAL REPORT OF
THE INFORMATION HIGHWAY
ADVISORY COUNCIL

SEPTEMBER 1997

Canada

The Comprehensive Strategy

connecting.canadians

Canada Online

Smart Communities

Canadian Content Online

Electronic Commerce

Canadian Governments Online

Connected Canada to the World

… to make Canada the most connected country in the world

Key Characteristics of E-com

- **Global**

- **Horizontal**

- **Necessitates a balance of interests**

- **Requires actions by:**
  - **Business**
  - **Governments**
  - **Citizens/Consumers**

- **It is still commerce!!!**

Ingredients for Success

Speed

- Firms
- Industries
- Economies

Partnerships

- Private & Public Sector
- Global Cooperation

Global Thinking is a Must

- Internet marketplace is truly global

Vision

- For the Knowledge Economy & Society

Task Force on Electronic Commerce...

Mandate

- Develop a national strategy on electronic commerce
- Coordinate activities across government departments
- Advance E-Com agenda in international fora

Structure

- Fixed time frame
- Intensive work program and deliverables
- Staff drawn from across government
- Involvement of citizens and business

Premise

- Existing frameworks can be adjusted
- Deal promptly with new issues

Policy Framework for E-com

Building Trust in the Digital Marketplace

➢ **Privacy, Cryptography, Consumer Protection**

Clarifying Marketplace Rules

➢ **Legal and Commercial, Taxation, Trade Policy, Intellectual Property**

Strengthening Information Infrastructure

➢ **Telecom Policy, Network Modernization, Standards**

Realizing the Benefits/Market Development

➢ **Governments as Model Users, Continuing Social and Economic Research, Market Development Strategy, Inclusive Global Frameworks**

...E-Com Friendly Policy Environment

Fiscal Climate

◆ **Tax Neutrality**
Commitment to technology neutral taxation regime

◆ **Economic Statements 2000, 2001**
Rewarding innovation-based investment

Consumer Trust

◆ **Privacy**
Framework legislation governing the protection of personal information

◆ **Consumer Guidelines**
Voluntary business guidelines to protect consumers conducting online transactions

Business Confidence

◆ **E-Signatures**
Legal framework for digital signatures in electronic records

◆ **Cryptography**
Policy allowing domestic use of any strength cryptography, no mandatory key recovery

E-Com Policy Environment

Cryptography

➤ Policy allowing domestic use of any strength cryptography, no mandatory key recovery

Consumer Protection

➤ Voluntary guidelines to protect consumers conducting online transactions

Tax Neutrality

➤ Commitment to technology neutral taxation regime

Privacy

➤ Framework legislation governing the protection of personal information

Standards

➤ Domestic and International E-Com standards framework

E-Signatures

➤ Legal framework for digital signatures in electronic records

Public Key Infrastructure (PKI)

➤ Policy framework for the Government of Canada public key infrastructure

The Importance of Trust and Confidence

➢ Needed in all relationships - customers, suppliers, business partners, etc…

➢ You need to know that the information given and received has not been altered in transmission

➢ You need to have confidence that the party they are dealing with is the right one… and that party needs to know they are dealing with you

✓ *Is the person you are dealing with the right one?*

✓ *How do others know you are who you say you are?*

Partners in Creating Confidence & Trust

Government	Business	Consumers

Government:

- Creating an e-com friendly environment
- Policy and legislation
- International initiatives

Consumers:

- Awareness
- Informed decisions

Business:

- Industry standards
- Voluntary codes
- Use of available technologies (e.g. cryptography)

Trust Agenda Components

1. Privacy

2. Consumer Protection

3. E-Signatures

4. Cryptography

Cryptography and the Trust Agenda

Confidentiality ☹ **Encryption**

➢ **ensuring that the information within a message can be kept private**

Integrity ☹ **Electronic signature**

➢ **ensuring that the message has not been altererd or corrupted**

Non-repudiation ☹ **Electronic signature**

➢**ensuring that neither party can deny that the transaction occurred (i.e. ensures that the transaction is binding)**

Authentication ☹ **Digital certificate**

➢ **providing assurance that parties are who they say they are**

Electronic Commerce Branch Consultation Program

Objectives

- To consult with stakeholders:
  - to identify issues from the supplier and user perspectives
  - to identify public policy considerations
  - to seek views on the respective roles of the private and public sectors

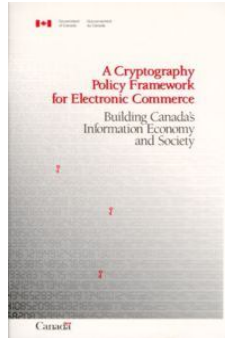- To assess the benefits of a Canadian strategy

Electronic Commerce Branch Consultation Program (cont'd)

Phases

➢ Initial Bilateral Discussions (May - October 1999)

➢ Authentication Policy Workshop (December 1999)

➢ Preliminary Discussion Paper (April 2000)

➢ Final Consultation Paper (July 2000)

➢ Summary Report (February 2001)

➢ Reports from all phases on Industry Canada website
(http://e-com.ic.gc.ca/english/authen/631e10.html)

  ➢ http://e-com.ic.gc.ca/francais/authen/631e10.html)

Authentication Framework Considerations

Cryptography

➤ Policy supporting industry-led authentication services

E-Signatures

➤ Legal framework for electronic signatures

GOC PKI

➤ Policy framework for the Government of Canada

Privacy

➤ Framework legislation

Consumer Protection

➤ Voluntary guidelines

Standards

➤ Canadian Strategic Standards Team

Players

- Suppliers (hardware/software)

- Service Providers (come from all industry sectors)

- End users (business associations and consumer groups)

- Auditors and Consultancy Firms

Role of Industry Canada

➢ Ensuring the reliability of authentication service providers and their services is part of Industry Canada's trust and confidence agenda

➢ Industry Canada's interest is at a broad policy level (not detailed implementation level)

➢ Using high-level parameters to define authentication services (technology neutral)

➢ Choice and competition are key

Approach

➢ A private/public sector working group has been established to develop principles

➢ Blend of policy, legal and technical interests represented on the group from a broad range of stakeholders across various industry sectors

➢ Industry Canada Chairs and provides analytical and Secretariat support

➢ Private sector providing Vice-Chair and making analytical contributions to the process

➢ Work recognized by private sector as a key part of the trust agenda

Partnership with Private Sector

Canadian E-Business Opportunities Roundtable

⇒ **Established summer of 1999 to accelerate Canada's participation in the Internet Economy**

⇒ **Private sector-led initiative in partnership with the public sector**

⇒ **Designed to:**
  - ➲ **Overview of the current state of e-business in Canada**
  - ➲ **Vision for the development of Canada's Internet economy**
  - ➲ **Identification of strategies**
  - ➲ **Inspire Canadian business to approach the opportunities presented by the Internet with a sense of urgency**

Report of the Canadian E-Business
Opportunities Roundtable
January 2000

FAST FORWARD:
Accelerating Canada's Leadership in the Internet

Prepared by The Boston

Report of the Canadian E-Business
Opportunities Roundtable
February 2001

FAST FORWARD 2.0
Taking Canada to the Next Level

Prepared by The Boston Consulting Group (Canada)

...International Leadership

WTO

First OECD Ministerial Conference on E-Commerce Ottawa, 1998
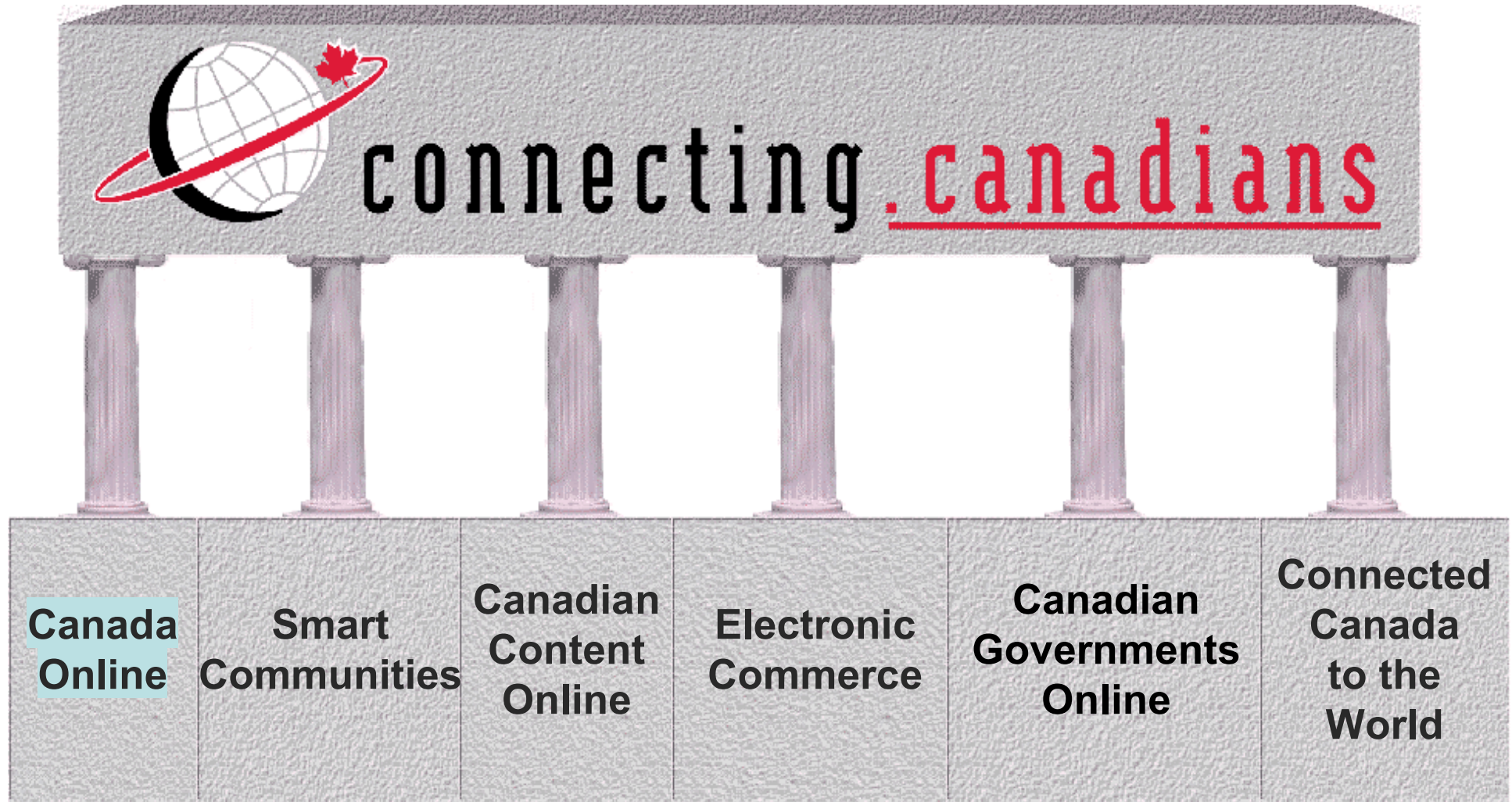
APEC

Canada-U.S. E-Commerce Policy Forum New York, 2001

Canada to chair the G-8 dot force in 2002

dot force | **Digital Opportunity Task Force**
A d d r e s s i n g   t h e   g l o b a l   d i g i t a l   d i v i d e

We Are In The Network Age

"Today's technological transformations are intertwined with another transformation - globalization - and together they are creating a new paradigm: the network age."

United Nations Human Development Report, July 2001

- Instant access to knowledge
- Transforming business
- Borderless, global economies
- New ways of citizen – government engagement

"Our objective should be no less than to be recognized as one of the most innovative countries in the world."

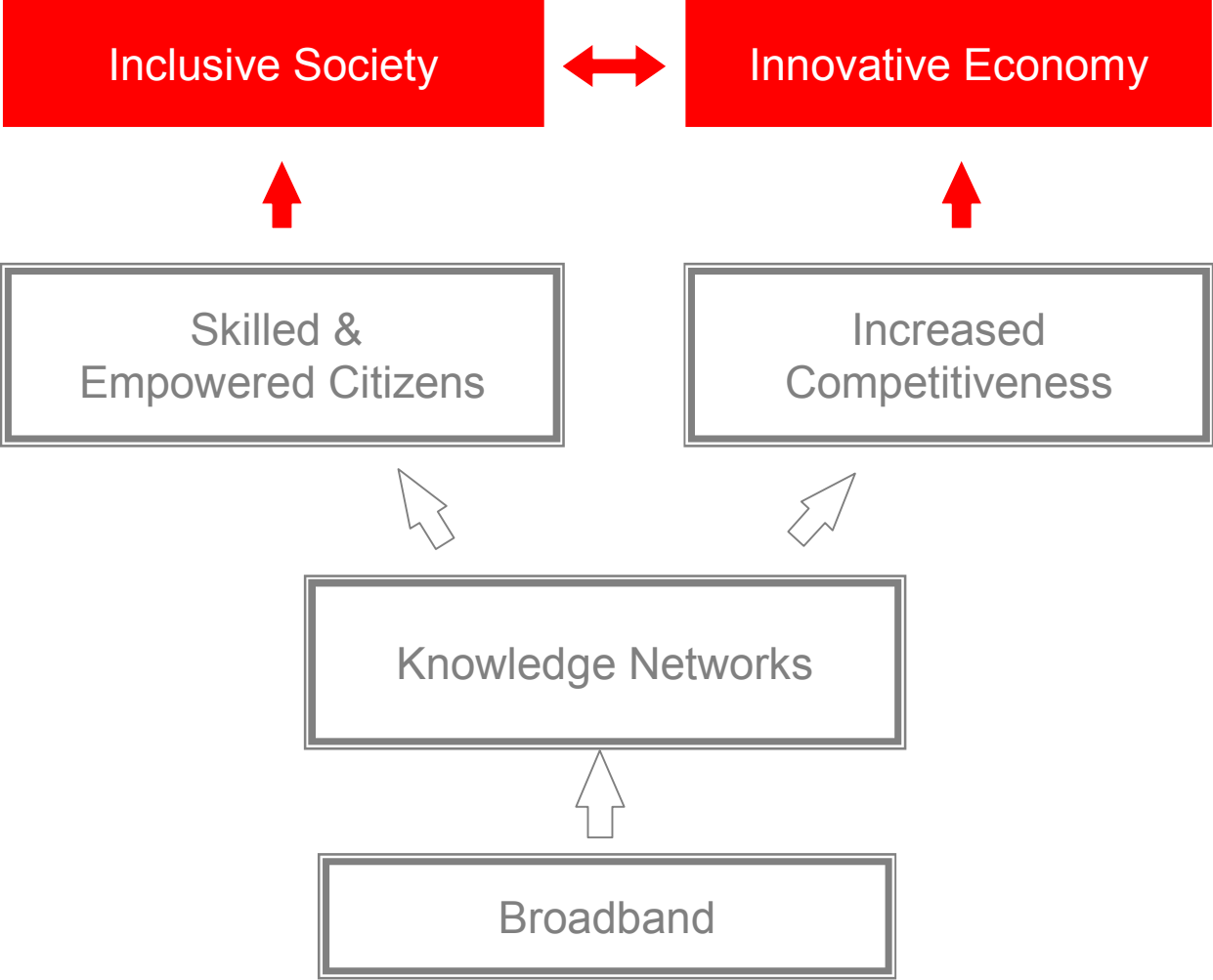*Speech from the Throne, 2001*

A National Vision

"Make the information and knowledge infrastructure accessible to all Canadians, thereby making Canada the most connected nation in the world."

Speech from the Throne 1997

…Set the Stage

Broadband is the Next Step

Inclusive Society	↔	Innovative Economy

↑ ↑

Skilled & Empowered Citizens		Increased Competitiveness

Knowledge Networks

Broadband

Government is Committed to Equal Access for ALL Canadians

- Established National Broadband Task Force

- **Mandate:**
  - **the need and characteristics of communities not likely to gain** access to high-speed services by 2004
  - the technical, institutional and financial barriers which could delay provision of services by the private sector
  - the roles governments might play in overcoming these barriers

Membership:
  - Leading Canadians from all sectors:
    - ✓ Industry (telcos, cablecos, service providers, content providers)
    - ✓ Public interest
    - ✓ Education and libraries
    - ✓ Health
    - ✓ Aboriginal

National Broadband Task Force's Response

- Essential that ALL Canadians have access

- Make it equitable and affordable

- Ensure balanced public-private partnership

- Understand it is more than infrastructure that is required (encourage use and content development)

- Place highest priority on First Nations, rural and remote

- Called for total investment of $4.6B by ALL PARTNERS (federal, provincial, territorial, municipal governments, and private sector)
  - ✓ Community Champion seed funding to all unserved communities ($50 to $70M)
  - ✓ Transport to unserved communities ($1.3B to $1.9B)
  - ✓ Connect public institutions in unserved communities ($500M to $600M)
  - ✓ "Last mile" to homes within unserved communities ($2B)

Ensuring Equal Access for All Canadians

- *Telecommunications Act* policy objectives:
  - "Safeguard, enrich and strengthen the social and economic fabric of Canada and its regions"
  - "Render reliable and affordable telecommunications services of high quality accessible to Canadians in both urban and rural areas"

« Access to service should depend on the citizenship rights of the individual, not on their choice of where to live. »

Sec. Of State Andy Mitchell

"Without innovative public policy, these technologies could become a source of exclusion, not a tool of progress."

United Nations Development Report, July 2001

Criteria for Deployment

- Respond to community needs (demand aggregation)
- Private sector should play an active role
- Governments should foster competition and provide communities with opportunities to play a leadership role
- Provide third-party open access
- Competitive and technologically neutral process
- Sustainable and scaleable
- One-Time Federal Capital Investment

National Selection Committee

Size	15 to 18 Board members, 1 Chair (David Johnston, President of University of Waterloo)
Representation	Candidates from all 5 regions, gender, language balance, not in conflict of interest
Qualifications	Regional/National recognition for expertise
Operation	Arms length from government Will provide recommendations to Minister of Industry

For Further Information

Connecting Canadians
www.connect.gc.ca

Electronic Commerce
www.e-com.ic.gc.ca

ICT Industry
www.strategis.gc.ca/infotech
www.strategis.gc.ca/SSG/sf01703e.html

National Broadband Taskforce
www.broadband.gc.ca

G8 DOT Force
www.dotforce.org