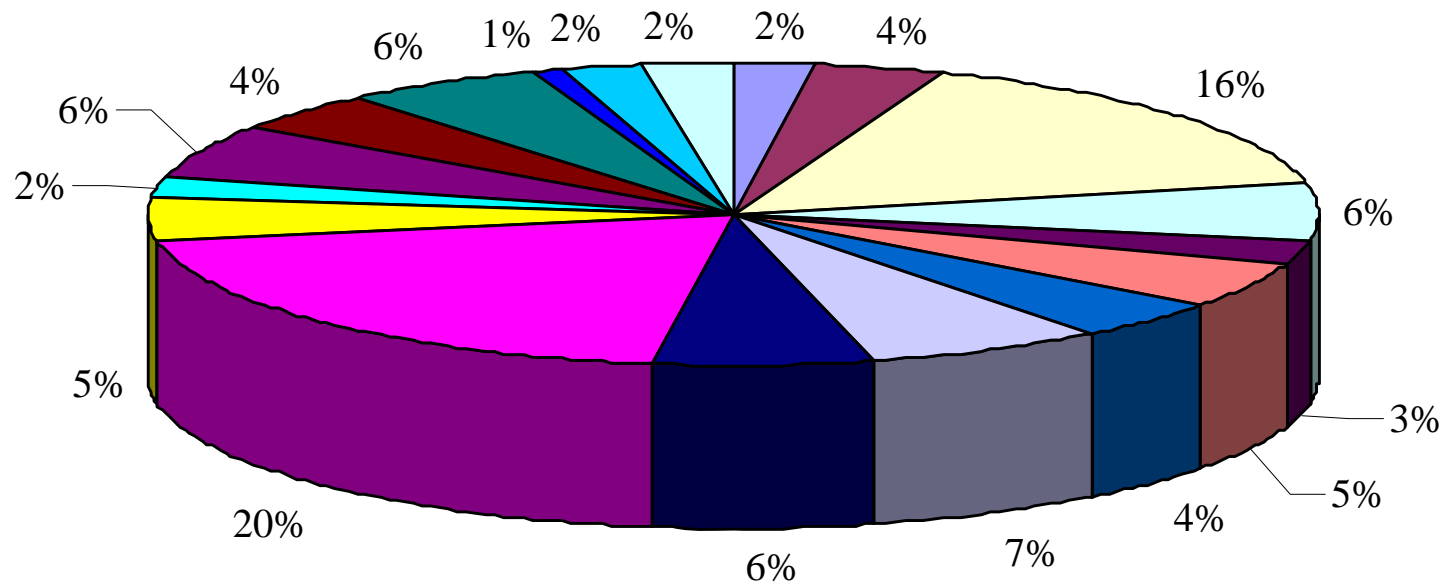


Industrial Transformation

Towards a High-tech Environment

Current Situation

GDP at Basic Price by Industries (2006)



Manufacturing industry accounted for 16% of the Canada's GDP in 2006, followed by Finance and Insurance

Canadian industries

- A wide variety of industries
service industry, oil industries, agricultural
industry
and automobile industry.
- G8 & NAFTA



Industrial Transformation

Application of advanced technology

Private Sector

- Investments on Research and Development

Public Sector

- Governmental Support (Accelerator Centre)

Industrial Transformation

Private Sector

Main Focus: Energy R&D

Two examples

- photovoltaic cells → convert sunlight to electricity
SOLAR ENERGY
- Biomass → convert them and form electric power
BIOMASS ENERGY



Industrial Transformation

Private Sector

- Spent \$649 million in alternative energy researches in 2003
- 56% of the total R&D in Canada



A Real Case Example: Toyota Motor Manufacturing Centre



Toyota Guiding Principle

"Dedicate ourselves to providing clean and safe products and to enhancing the quality of life everywhere through our activities."



TMMC -- ISO 14001

- A formal environmental policy
- A management system designed to track environmental performance and established mechanisms for continuous improvement
- TMMC increases the environmental awareness of team members through training and the understanding of process control

Protecting the Environment

- Protect the environment and ensure that its automobile manufacturing operations are safe for its team members, the community and the environment
- Toyota and all manufacturing sites have adopted the *Toyota 2010 Global Vision*
- "Kindness to the Earth" policy, which states: 'Toyota will use outstanding environmental technologies to promote recycling on a global scale.'
- Constitutes a major program for ensuring continuous improvement in the environment

Water Recycling System

- Comprehensive treatment
- → Extensive testing
- → Water recycling system



- → Agitation for easier filtering
- → Consumption substantially reduced

TMMC: Consumption substantially reduced

ECOPAK

- Environmental Awareness
- Compliance
- Objectives
- Pollution Prevention
- Auditing
- Kaizen



Minimize the amounts of materials, water, and energy continuously

Examples:

1. The Lexus RX 330, TMMC uses environmentally friendly waterborne paint cartridge technology
→ Consumes less water, fewer solvents and reduces emissions
2. Fewer carriers on the road
→ Reduced the total distance traveled, the amount of fuel consumed and vehicle emissions
3. Use returnable packaging
→ Reduce waste and the impact on the environment

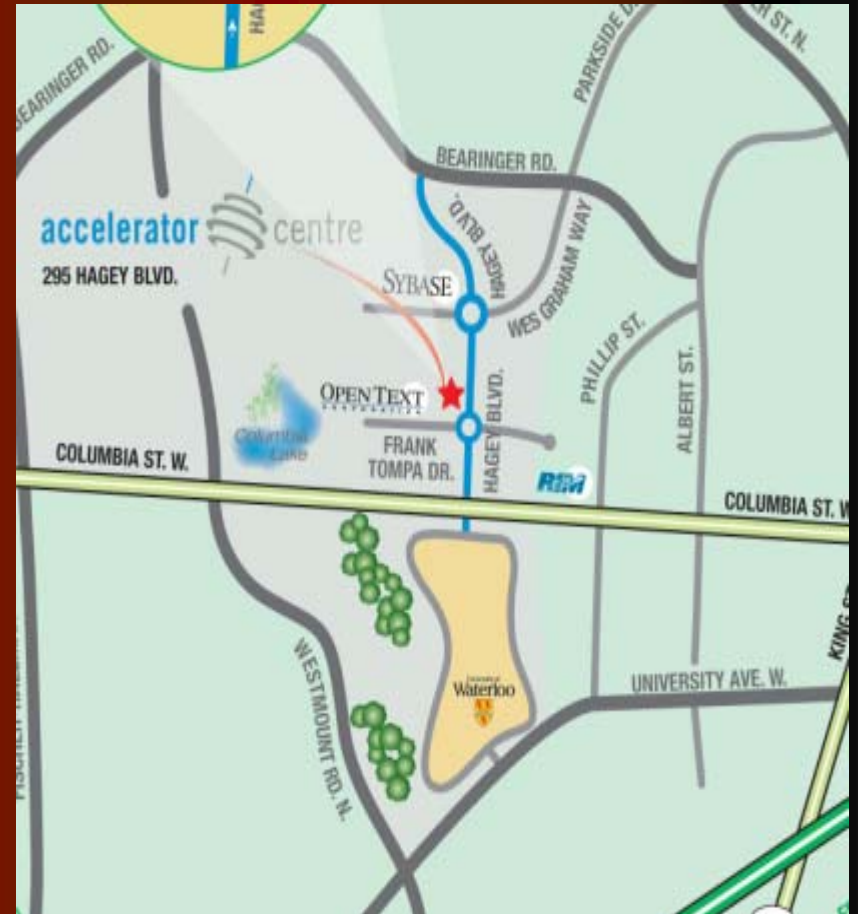
The Public Sector

Accelerator Centre



Background

- May 2006
- University of Waterloo
- ~ HKSTP



Theme

- Help high-tech firms to commercialize their products or services
- Maximize potential & Succeed in high-tech business
- Esp. early stage of business development
- Services & facilities

Support Services

- Education programs
- Networking Opportunities
- Business Advice/ Mentoring
- Administrative Support
- Access to University Research & Expertise

Facilities

- Professional office
 - Meeting room
 - Networking area
 - Kitchen
 - Free parking
- Communication infrastructure



Clients & Tenants



Characteristics

- Government support:

Province of Ontario

Regional Municipality of Waterloo

City of Waterloo

- Community support

- Companion Organization:

Ontario Centres of Excellence and National Research Council

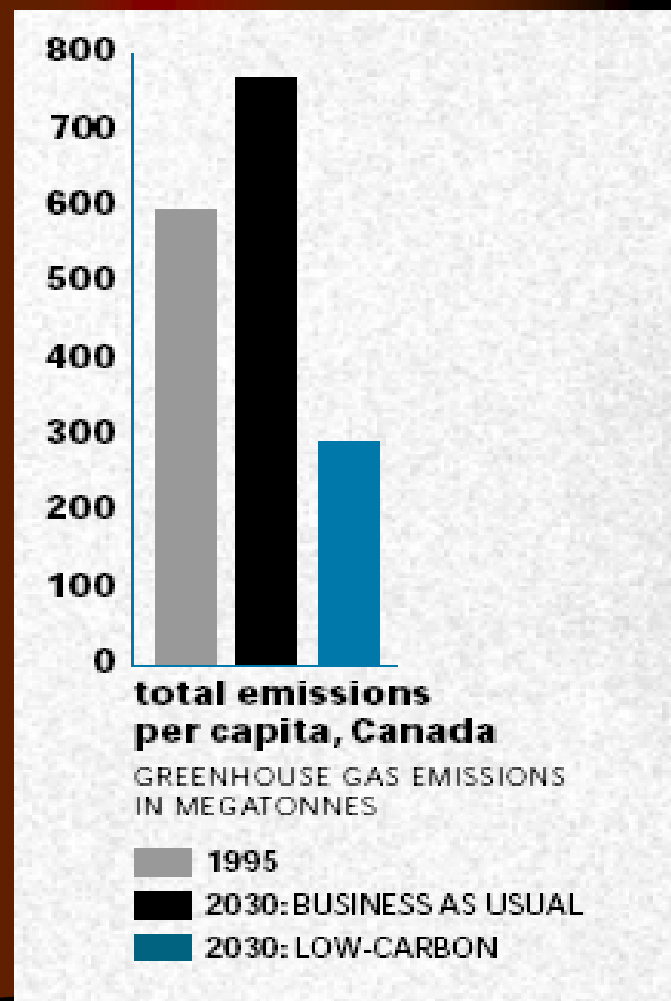
Role

- Not-for-profit organization
- Accelerator
- Helper
- Encourage growth of high-tech firms
- Transformation

Reasons Behind

Concerns about the environment

- Canada leads in Energy Waste
- Increasing GHG emissions
- Committed to Kyoto Protocol: reduce GHG to 6% below that of 1990 by 2010



Reduce cost in a long run



- High initial cost, but once established, the average cost will be lowered

- High oil price

POWER

COOL SOLUTIONS
TO GLOBAL WARMING

Shift

Nurture of new businesses

- Build up a protective and supportive environment (Hong Kong Science and Technology Park)
- Help systematically evaluate innovations
- Protect the intellectual property
- Accounting, IP management, high-speed internet access and vital business networks

Thank You!